

# ARCHITECTURAL RECORD

BUILDING TYPES STUDY  
NUMBER 198

COMMERCIAL BUILDINGS

MAY 1953





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Laine-Garrett Co.,  
Formica Fabricator, Tucson, Ariz.

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# ARCHITECTURAL RECORD



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Cover: Background—architect's drawing for Erickson's Filling Stations, Minneapolis, Minn. Thorshov and Cerny, architects. Photos—left, Fellman Clinic, Shreveport, La. Samuel G. and William B. Wiener, architects; photo by Clarence John Laughlin. Right, Clarke & Courts Building, Harlingen, Tex. Cocke, Bowman and York, architects; photo by Urie Meisel.

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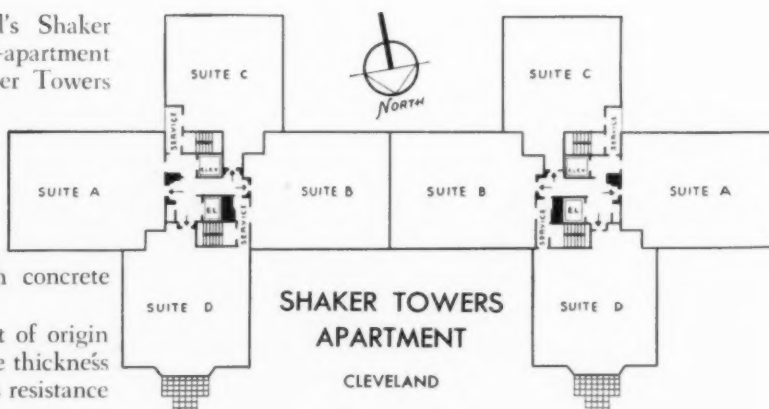
## NEW APARTMENT HOUSE IN CLEVELAND'S SHAKER HEIGHTS SECTION

Located immediately adjacent to Cleveland's Shaker Square, an exclusive shopping and residential-apartment section of the city, is the new 12-story Shaker Towers Apartment. This brick and steel-frame structure contains 92 outside suites, each with five, six or seven rooms.

The architects of the Shaker Towers Apartment provided fire-safety through the use of floor structures built of Bethlehem Open-Web Steel Joists in combination with concrete floor slab and plaster ceiling.

This construction confines a fire to its point of origin for from one to four hours, depending upon the thickness of slab and type of plaster used. It also provides resistance to vibration and sound-transmission.

The Bethlehem Joists reached the site completely prefabricated, ready for immediate, easy placing without false-work or special equipment. Future maintenance of the building will be simplified because the steel joists won't sag or shrink to cause gaps between baseboard and floor.



*Architect, Joseph Ceruti, A.I.A.*

*General Contractor, Roediger Construction Co.*

*Structural Engineer, Barber and Magee*

*Steel Fabricator and Erector, Builders Structural Steel Corp.*

*... all of Cleveland*

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### BETHLEHEM OPEN-WEB STEEL JOISTS



# THE RECORD REPORTS

## P E R S P E C T I V E S

*William Adams Delano, 1953 A.I.A. Gold Medalist at 79,  
Answers a Record Question: What Were the High Spots?*



IT IS IMPOSSIBLE, as one reviews one's architectural career, to pick out the buildings that gave the greatest pleasure to design: so many elements enter the picture — the character of the client, the site, and the associates who aided so ably and generously in the work — but here are a few (for which I was personally responsible) that stand out in my mind with particular satisfaction.

FIRST AND FOREMOST, our office at 126 East 38th Street, because it has been for nearly 40 years a continuing delight to work there. In 1916, I was able to persuade Mr. J. P. Morgan, president of The Murray Hill Association, which guarded the domestic sanctity of Murray Hill, to let us turn a dilapidated stable — being used as a milk depot — into an architect's office. We agreed to put a new façade on the building and display no sign. The interior we adapted to our practice.

The Walters Art Gallery in Baltimore — my first big job — because Mr. Walters gave me this great opportunity when I was fresh from the École des Beaux-Arts.

India House on Hanover Square, the Knickerbocker, Brook, and Union Clubs — all in New York City — because I had to deal with committees who often had divergent ideas, requiring patience and diplomacy; but they were great fun, and I made many friends among the members.

FOR MANY OF THESE FRIENDS, who strangely enough remained warm friends through the years, I designed country and city houses; some were big, others small. Among the larger town houses were those for Willard

Straight, William Woodward, Harold Pratt, George Baker, Jr., and a group of four houses for Mr. Fulton Cutting, for his sons and daughters; also, the city house in New York and the country house and gardens at Mt. Kisco for Robert Brewster, an old and devoted friend of college days. The Pratt house, now the home of The Council on Foreign Relations, was particularly gratifying because it came "out of the blue" when, after the First World War, I came back to New York and found our "cupboard bare."

ON LONG ISLAND, where I built my own house in 1909 — thanks to Bronson Winthrop, for whom I was planning a house and garden — I designed many others: a studio in the Wheatley Hills, for Mrs. Harry Payne Whitney, a wonderful patron of the arts, who gave me a free hand and carte blanche; a large house and garden for James A. Burden at Syosset; also near Syosset, on the shore of a pond, a small house for Chalmers Wood — which has been much admired; another large one for Mrs. Benjamin Moore, with the same waterside advantage, at East Norwich; and one for Edwin Fish, which had a brookside setting — rare on Long Island. On the North Shore, large houses and gardens for Harrison Williams, Mrs. Paul Prybil, Ferdinand Eberstadt, Bertram Work and, last but not least, an enormous chateau on a high hill overlooking Cold Spring Harbor, for Otto Kahn — a tremendous folly!

In Virginia, I had the good fortune to "do over" Mirador — in the foothills of the Blue Ridge Mountains — the home of the celebrated Langhorne family, which a niece, Mrs.

Ronald Tree, had acquired. Later, I designed houses near Charlottesville for General ("Pa") Watson and the Stanley Woodwards; and still another for Paul Mellon at Upperville. I love Virginia, and the owners of these houses were all delightful clients. I must not forget a very large house at Montgomery, outside of Cincinnati, for the Jack Emerys (she, a daughter of the Dana Gibsons); they were great friends and most appreciative clients.

AMONG PUBLIC BUILDINGS, I would mention the Divinity School and Sterling Chemistry Laboratory at Yale — my Alma Mater — because I did not have to design them in Gothic — they were far removed from the super-Gothic of the main campus; at Lawrenceville, my preparatory school, I designed eight buildings for two able and friendly Head Masters — Mather Abbott and Allan Heely; the Third Church of Christ, Scientist, in New York City, because I dealt with an understanding and cooperative committee; in Washington, the Japanese Embassy on Massachusetts Avenue (difficult clients, I found them); also in Washington, the United States Post Office Department building and the Circular Plaza (this latter, unhappily, not completed) on 12th Street between Pennsylvania and Constitution Avenues, because this commission brought me in contact with the most charming gentleman, Andrew W. Mellon, who later asked me to design the United States Chancellery on the Place de la Concorde in Paris. While the Chancellery was building, an old friend and retired architect, Jack Gade, recommended me to Wm.

(Continued on page 360)

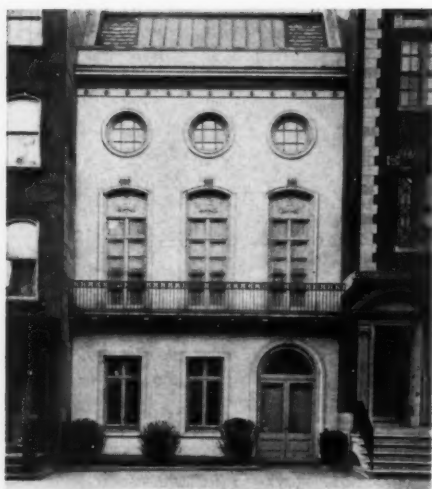




DESIGNED BY THE 1953 A.I.A. GOLD MEDALIST

*Examples of the Work of William Adams Delano, F.A.I.A.,*

*Soon to Receive the Institute's Highest Honor*



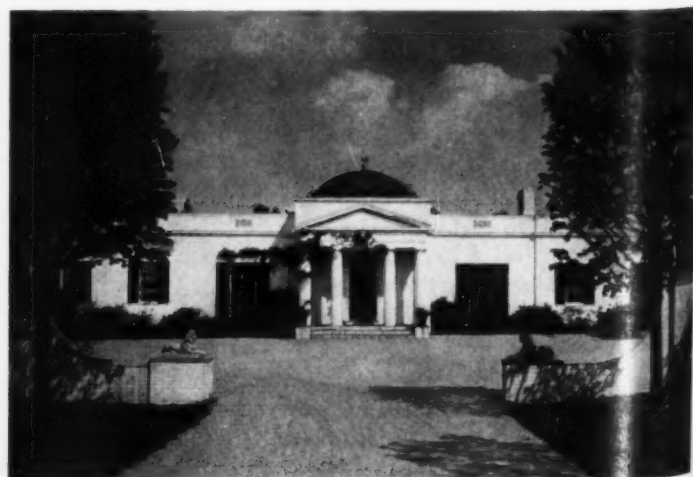
1916—and still housing the offices of Delano & Aldrich, Mr. Delano's firm since 1903: 126 E. 38th St., New York City



1931—The Divinity School, Yale University, New Haven, Conn. Another of Mr. Delano's favorite buildings, not shown here, was also done for Yale, which is his alma mater—the Sterling Laboratory



1932—The Union Club, at the northeast corner of Park Avenue and 69th Street, New York City, one of many clubs Mr. Delano designed



1928—The Chalmers Wood house, Syosset, L. I. Mr. Delano designed many residences for country estates here and abroad



1931—United States Government Chancellery on the Place de la Concorde in Paris



1929—William Hallam Tuck house, on the Battlefield of Waterloo, near Brussels in Belgium



1930—United States Post Office Department Building, Washington, D. C.



1937-1943—LaGuardia Field, Queens, N. Y.

#### FROM THE ARCHITECT TO THE PRESIDENT — MAY 1948



A second story Balcony!  
It seemed a simple plan  
To give a quiet breathing space  
To a much harried man.  
Yet no sooner was it mooted  
Than a fierce attack began:  
The die-hards of the nation  
Pronounced a solemn ban —  
What! touch that sacred edifice?  
(Quite often touched before)  
'Twas sacrilege to those who loved  
The sunshine of T. R.  
But now the storm's subsided —  
The tea pot scarcely stirs;  
And the shade of Thomas Jefferson  
In shadow gently purrs. — Wm. Adams Delano



## THREE A.I.A. POSTS CONTESTED

ELECTIONS appear likely to play a bigger role in the 85th convention of the American Institute of Architects June 15-19 at Seattle than in any convention since the Houston epic in 1949.

The convention faces a contest over the presidency for the first time since that year, with First Vice President Kenneth Wischmeyer of St. Louis and Secretary Clair Ditchy of Detroit both candidates to succeed President Glenn Stanton of Portland, Ore., who is completing his second term.

Two other contests: George Allison of Los Angeles and Gulf States Regional Director Howard Eichenbaum of Little Rock for second vice president and Marcellus Wright Jr. of Richmond and M. Edwin Green of Harrisburg, Pa., for Middle Atlantic regional director.

Candidates for other offices and directorships, so far uncontested, are: first vice president — Norman J. Schlossman, Chicago, the present second vice president; treasurer — Maurice Sullivan, Houston, the incumbent; secretary — George Bain Cummings, Binghamton, N. Y.; Northwest Regional Director — Waldo Christenson, Seattle; Gulf States Regional Director — Clyde Pearson, Montgomery, Ala.; Great Lakes Regional Director — Raymond Kastendieck, Gary, Ind.

### 30 New Fellows Named

The Institute last month released the names of 30 members who will be advanced to Fellowship in the traditional ceremony at the annual banquet and announced more program details.



A.I.A.'s new honorary members: Gurdon M. Butler (left) of Tucson, dean emeritus of the University of Arizona's College of Engineering, and Frank Creedon, Director of Installations, Department of Defense

### Convention News Editions

Two special editions of the *Chicago Construction News*, F. W. Dodge Corporation newspaper, will be published in connection with the A.I.A. convention.

The first, planned as a guide to the convention, will be distributed on the opening day, June 15, to all attending the convention. The second, a complete report on proceedings, will be published June 23 and mailed to every member of the A.I.A.

A *Construction News* staff headed by Ernest Mickel of the Dodge Washington News Bureau will provide on-the-spot coverage.

Pietro Belluschi, dean of the School of Architecture and Planning at Massachusetts Institute of Technology, will be the convention's closing speaker.

Richard Bennett of Chicago will be the moderator for the seminar on Liturgical Arts, with Maurice Lavanoux of the Liturgical Arts Society, Rev. Marvin Halverson, executive secretary of the Department of Worship and the Arts of the National Council of Churches and Eric Mendelsohn of San Francisco as the speakers.

The seminar on Oriental Influence on American Art and Architecture will have as speakers Prof. Winfield Scott Wellington of the University of California and Harwell Hamilton Harris, director of the Department of Architecture at the University of Texas, among others.

### The prospective Fellows are:

Thomas Henry Atherton, Wilkes-Barre, Pa.—Public Service; Turpin Chambers Bannister, Urbana, Ill.—Education and Literature; Richard Marsh Bennett, Chicago, Ill.—Design and Education; Leon Chatelain, Jr., Washington, D. C.—Public Service; Theodore Irving Coe, Washington, D. C.—Service to The Institute and Public Service; Robert Charles Dean, Boston, Mass.—Design and Public Service.

John Reed Fugard, Chicago, Ill.—Design and Public Service; William Charles Furer, Honolulu, T. H.—Service to The Institute; E. James Gambaro, New York, N. Y.—Service to The Institute; Henry L. Gogerty, Los Angeles, Calif.—Science of Construction; Milton Latour Grigg, Charlottesville, Va.—Design; Arthur P. Herrman, Medina, Wash.—Education.

Eric Trevor Huddleston, Durham, N. H.—Public Service; Robert Allan Jacobs, New York, N. Y.—Design; Louis I. Kahn, Philadelphia, Pa.—Education; Morris Ketchum, Jr., New York, N. Y.—Design; Adrian Nelson Langius, Lansing, Mich.—Service to The Institute and Public Service; Curtis Meredith



1953 Gold Medal: William Adams Delano, F.A.I.A., of New York



Craftsmanship Award: Emil Frei of St. Louis, stained glass artisan



Fine Arts Medal: Donal Hord of San Diego, sculptor



Edward C. Kemper Award: Gerrit J. de Gelleke, F.A.I.A., Milwaukee

Lovelace, Bethlehem, Pa.—Design.

Albert Mayer, New York, N. Y.—Design and Education; Clarence William Palmer, Detroit, Mich.—Public Service; Lawrence B. Perkins, Chicago, Ill.—Design and Education; Geoffrey Platt, New York, N. Y.—Design; Otto John Teegen, New York, N. Y.—Design and Education; Wilbur Henry Tusler, Minneapolis, Minn.—Service to The Institute and Public Service; Charles Wellington Walker, Bridgeport, Conn.—Design and Service to The Institute.

Bertram Anton Weber, Chicago, Ill.—Design; Kenneth Curtis Welch, Grand Rapids, Mich.—Service to The Institute and Public Service; Walter F. Wilson, Lincoln, Neb.—Public Service; Kenneth Smith Wing, Long Beach, Calif.—Design; and Marcellus Eugene Wright, Richmond, Va.—Service to The Institute and Public Service.





Top: A.G.C.'s new president, C. P. Street (right) of Charlotte, N. C., accepts a National Safety Council safety honor award from H. B. Alexander, Harrisburg, Pa. Above: Army's new Chief of Engineers, Maj.-Gen. Samuel D. Sturgis Jr., one of convention's major speakers. Left: Arthur S. Horner, Denver, retiring president of A.G.C., with Undersecretary of Commerce Walter Williams, another speaker



## CONCERN ON BID PROCEDURES VOICED AT A.G.C.'S CONVENTION IN MIAMI

By Ernest Mickel

THE GENERAL CONTRACTORS concerned with building construction have taken another stand against the creation of bid depositories. They are aware of architects' "implied" approval of the system and are on guard to arrest the trend wherever it might develop.

This was brought out at the annual convention of the Associated General Contractors of America, Inc., held in Miami in March. The situation was high-lighted in a report made by Welton A. Snow, A.G.C.'s national staff member heading up activities of the organization's building contractors' division.

Mr. Snow said that at present there appeared to be no widespread interest in the establishment of bid depositories for the handling of subcontractors' bids to general contractors. However, he added, with the implied endorsement of this system inherent in the American Institute of Architects' approval of a contract documents committee pamphlet on the subject, "we may have to meet in the future supporting activities in some areas by A.I.A. members."

### Local Advice Sought

All A.G.C. chapters and members were urged to keep the national office

advised on local developments dealing with any such activity.

The Snow report also reviewed the division's request that the A.I.A. reemphasize the use of and compliance with provisions of the publication, "A Suggested Guide to Bidding Procedure." The reference was made especially to the issuance of addenda and established bid opening dates and hours. A.I.A. has promised the general contractors it will call the

(Continued on page 344)

### Architects Join Schoolmen For Record A.A.S.A. Meeting

ARCHITECTS from many parts of the country were in Atlantic City for the 79th annual convention of the American Association of School Administrators — biggest A.A.S.A. convention ever — and meetings of allied organizations, including the School Buildings Committee of the American Institute of Architects.

Of special interest to architects was the final afternoon's session on School House Construction, which had William Caudill, A.I.A., of Caudill, Rowlett, Scott and Associates, Bryan, Tex., and Henry Wright, A.I.A., of Kistner, Wright and Wright, Los Angeles, as architect members of a six-man panel.

The joint A.A.S.A.-A.I.A. jury which screened the exhibits included William O. Bailey, A.A.S.A., director of school construction for Maine; Charles Colbert, A.I.A., architect for the New Orleans Board of Education; Prof. Russell T. Gregg, A.A.S.A., head of the School of Education of the University of Wisconsin; Ray Hamon, A.A.S.A., chief of the School Housing Section, U. S. Office of Education; Alonzo Harriman, A.I.A., of Auburn, Me.; and Frank Lopez, A.I.A., senior associate editor of ARCHITECTURAL RECORD.



— Drawn for the RECORD by Alan Dunn

"You sure you want this atom-bomb tested?"

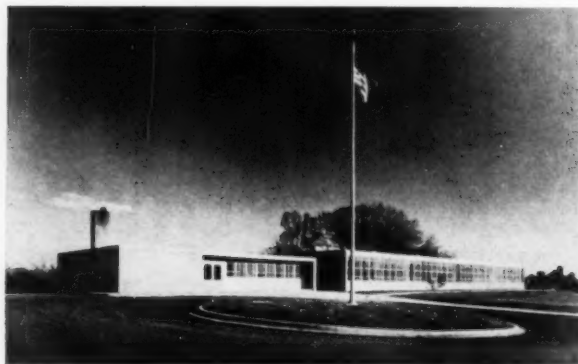
## THE RECORD REPORTS

### SCHOOL JURY PREFERS LOW BUILDINGS

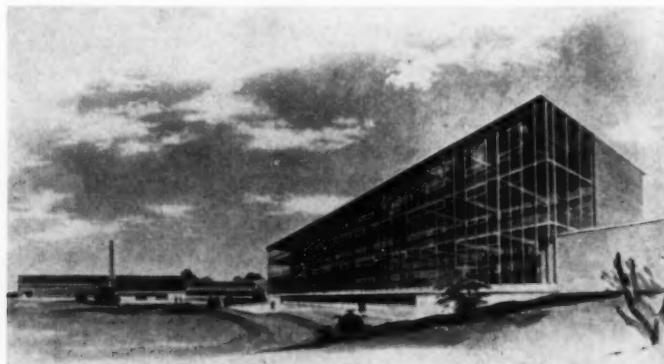
*Shown Here Are Six of Over 300 Entries  
Chosen by A.A.S.A.-A.I.A. Group  
For Noncompetitive Exhibit  
In Atlantic City*



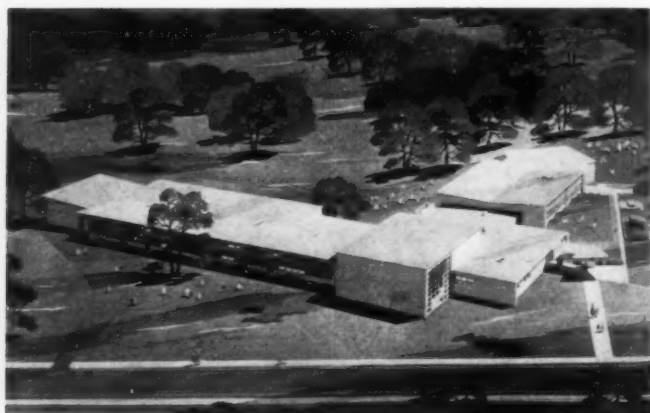
One-story schools predominated in the exhibit. Above: Boulder Creek, Calif., Elementary School addition (to be shown in the June issue); John Lyon Reid, Architect. The jury felt this was a fine example of craftsmanship



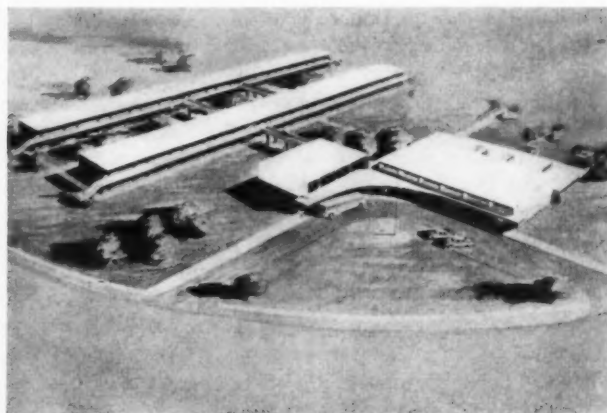
Hillandale Elementary School, Montgomery County, Md., another one-story entry; to be published soon in ARCHITECTURAL RECORD. Architects: McLeod & Ferrara



Senior High School and Community College, Keokuk, Iowa, one of the few multi-story buildings in the exhibit; topography demanded tall building. Architects: Perkins & Will



Lyncrest School, Fair Lawn, Bergen County, N. J., scheduled for completion in August. Arthur Rigolo, Architect

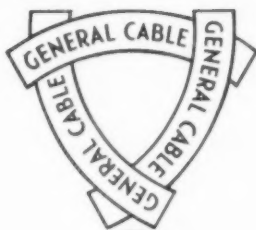


From Hawaii: Pearl Harbor Elementary School. Architects, Law & Wilson, Honolulu

Lima Elementary School addition, Delaware County, Pa., planned to allow still further expansion later. Red brick is only architectural link with original (1925) building. Clifford E. Gerner is the architect



**MOVES AHEAD . . .**



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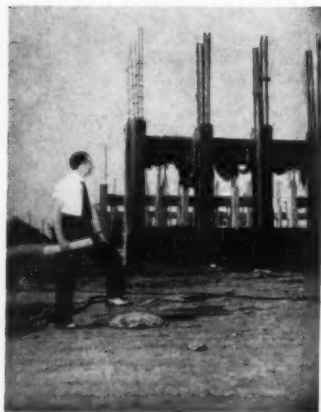
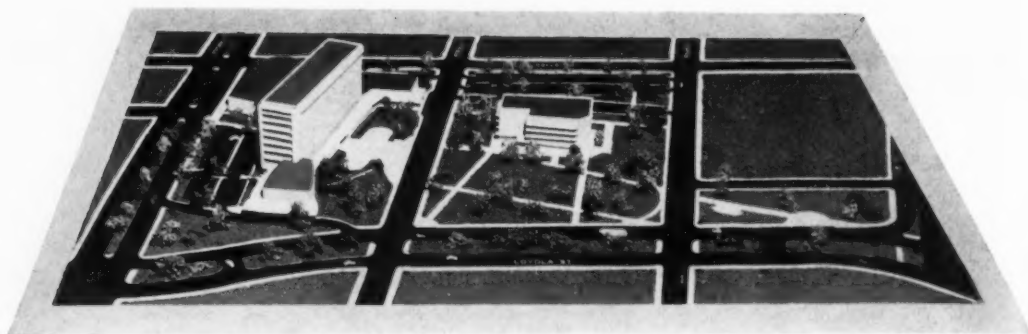
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Mayor Morrison, above, acted as tour director, described new projects including New Orleans civic center (top). Below: Louis C. Bisso, U. S. Grant 3d, and Architect M. Wayne Stoffle, chairman, New Orleans Citizens' Planning Committee



## CITY PLANNERS, ARCHITECTS, AT NEW ORLEANS

THE BENEFICIAL RESULTS of teamwork between architects, city planning officials, and citizens' planning groups were well indicated at the New Orleans conference of the American Planning and Civic Association, held in March.

The site of the meeting was ideal, since New Orleans, under the energetic direction of its mayor, deLesseps S. Morrison, has been undergoing a remarkable transformation as a result of intelligent city planning and effective civic action.

Gervais F. Favrot, chairman of the City Planning and Zoning Commission, described the working of the New Orleans system as being sparked by:

1. A forward-looking political head — the mayor.
2. An effective planning advisory committee made up of city department heads.
3. A citizens' city planning committee including 16 major civic groups appointed by the mayor. Chairman of this committee is a local architect, M. Wayne Stoffle of Ricciuti, Stoffle & Associates.

In five days of conferences and inspection trips, a far-ranging series of

subjects was covered under the direction of A.P.C.A.'s chairman, Horace M. Albright of New York, and president, U. S. Grant, 3d, of Washington, D. C.

How city planning sets the stage for effective architectural development was indicated by these subjects, which included panels and talks on comprehensive city planning, protection of parks and parkways, zoning, shopping centers, metropolitan and city-county planning, state aids to local planning, university planning service to communities, slum clearance and community development, the role of planning commissioners, the role of the citizen in planning.

An interesting contribution to the meeting was made by a group of deans and professors of architectural schools presided over by Buford L. Pickens, director of the School of Architecture at Tulane. No reputable university today, Dean Pickens pointed out, can afford to be disinterested in some phase of the comprehensive planning of cities and nearby regions. He and members of the panel described the important role universities are assuming in basic research and in training for city planning.



University planning panel: (left to right) Walter Creese, University of Louisville; Don H. Morgan, Illinois; Buford L. Pickens, Tulane; W. S. Bonner, Arkansas; Robert Stuart, Georgia Tech; William T. Arner, University of Florida



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## THE RECORD REPORTS

Unusual design of pool building was achieved by tying the large diagonal beams together with roof trusses, thus eliminating vertical supports beneath sloped seating areas (see section below). Reversed thrusts of roof and seats permitted opening the sides by eliminating heavy columns. Instead, light tension cables, 2 in. sq, were used. These pull upwards and stabilize against wind loads. Beams and trusses were specially designed to withstand unusual forces encountered



## AUSTRALIAN ARCHITECTS COMPETE FOR OLYMPIC KUDOS

AUSTRALIA's first nationwide architectural competitions in several years were held recently, furnishing the country's architects a chance to try their hands at the design of large-scale facilities for spectator sports. Occasion for the competition was the 1956 Olympic games which the Australians have hoped to hold in Melbourne.

Two competitions conducted by the Royal Australian Institute of Architects for the Australian Olympic Council of the International Olympic Federation sought designs for a stadium to house the games and for an Olympic pool.

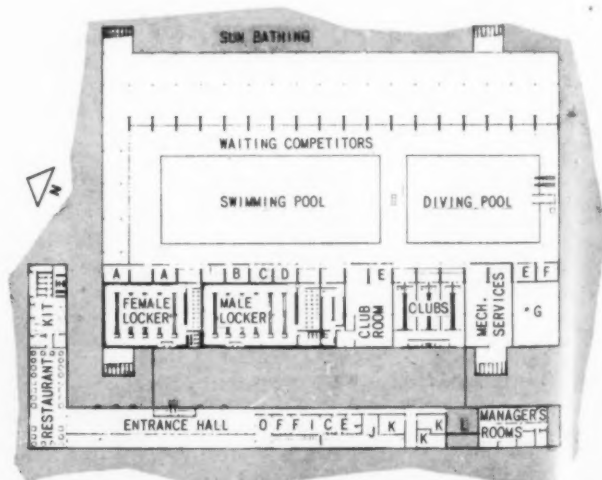
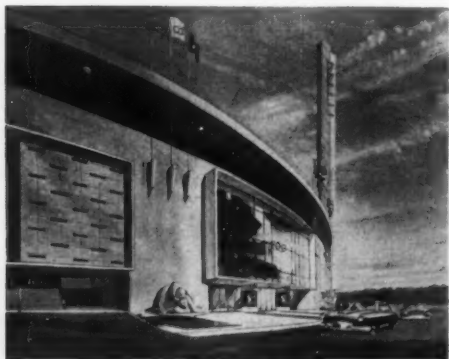
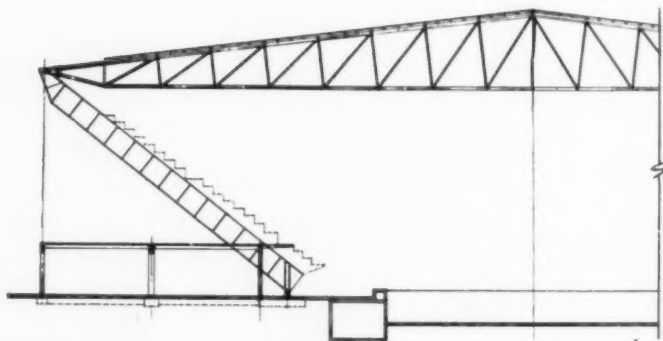
Prize-winning designs are shown on this page.

The pool design was the work of a team of young Melbourne architects and engineers, including John and Phyllis Murphy, Peter McIntyre and two members of the firm of J. L. and E. M. Daly — Kevin Borland, an architect and Bill Irwin, an engineer. Although it received the jury's unanimous endorsement, the design has been the cause of some controversy, including objections from residents of the neighborhood where it is scheduled to be erected. "This sort of building, accepted in most civilised

countries, is still a fairly frightening innovation here," commented Robin Boyd, Australian architect and one of the judges of the competition.

Describing the prize winner, Mr. Boyd predicted that it would "carry the modern architectural revolution in Australia out of the field of small buildings commissioned by progressive individuals into the realm of big business and construction."

The stadium design selected in the other competition is the work of Frank Heath, Melbourne architect and town planner, who won over 115 others.



A, First Aid; B, Pool Store; C, Instruction; D, Official; E, Press; F, Cleaner; G, Unallotted Space; H, Tickets; I, Bicycle Room; J, Sore; K, Masseuse; L, Garden

Above, left and right: section and plan of the pool building. Left: sketch of winning design in stadium competition. Designed for construction with both prestressed and steel-reinforced concrete, it accommodates 125,000 people



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Far left: Plant for Canadian Dyers & Cleaners, Toronto, as it will look after alterations and addition planned by Architect Murray Sklar. Left: the Torontian, Toronto's first big new hotel in 15 years, will have drive-in entrance; shopping center, promenade and roof restaurant will also be features of 200-room project. Cost is estimated at \$2,500,000; architects are Page & Steele



Above: projected shopping center for Berry Road, Etobicoke Township, Ont. Architects: Venchiarutti & Venchiarutti, Toronto

### Government Sees 1953 As Record Year in Building

OFFICIALS of the Department of Trade and Commerce have predicted that Canadians will spend the record sum of \$7,446,000,000 this year on new construction, machinery and equipment and on repair and maintenance of existing plant and structures.

A special report to the House of Commons by the Department also forecast a greater concentration of construction activity in urban areas than in the past two years, with increased emphasis on office, store and house building expected for 1953.

Building materials are expected to be in adequate supply, except perhaps for temporary shortages at the peak of the construction period, for the first time since World War II.

Major sources of new strength in 1953 were expected in areas retarded in favor of the defense program during the past two years.

"Housing outlays," the report notes,

"are expected to account for 18 per cent of the total program compared to less than 17 per cent in 1952. Capital spending in trade, financial and commercial service for such new facilities as retail and wholesale outlets, office buildings and hotels, is expected to be well above the 1952 figure."

There is also a backlog of church, university and hospital construction which can now go ahead.

The Department's predicted 1953 total is five per cent over the 1952 estimate, previous record prediction. It includes a total of \$4,400,000,000 total expenditures for construction, repair and maintenance of new buildings of all types, including housing, a figure which is seven per cent over the 1952 estimate.

### Architecture Beyond Science, Alberta Architects Are Told

THE ARCHITECT has a greater than purely scientific service to perform, said the guest speaker at the annual banquet of the Alberta Association of Architects.

Peter M. Thornton, past president of the Architectural Institute of British Columbia, speaking on the changing role of the architect in today's world, said architects must seek by interpretation of building to satisfy the emotional needs of man as well.

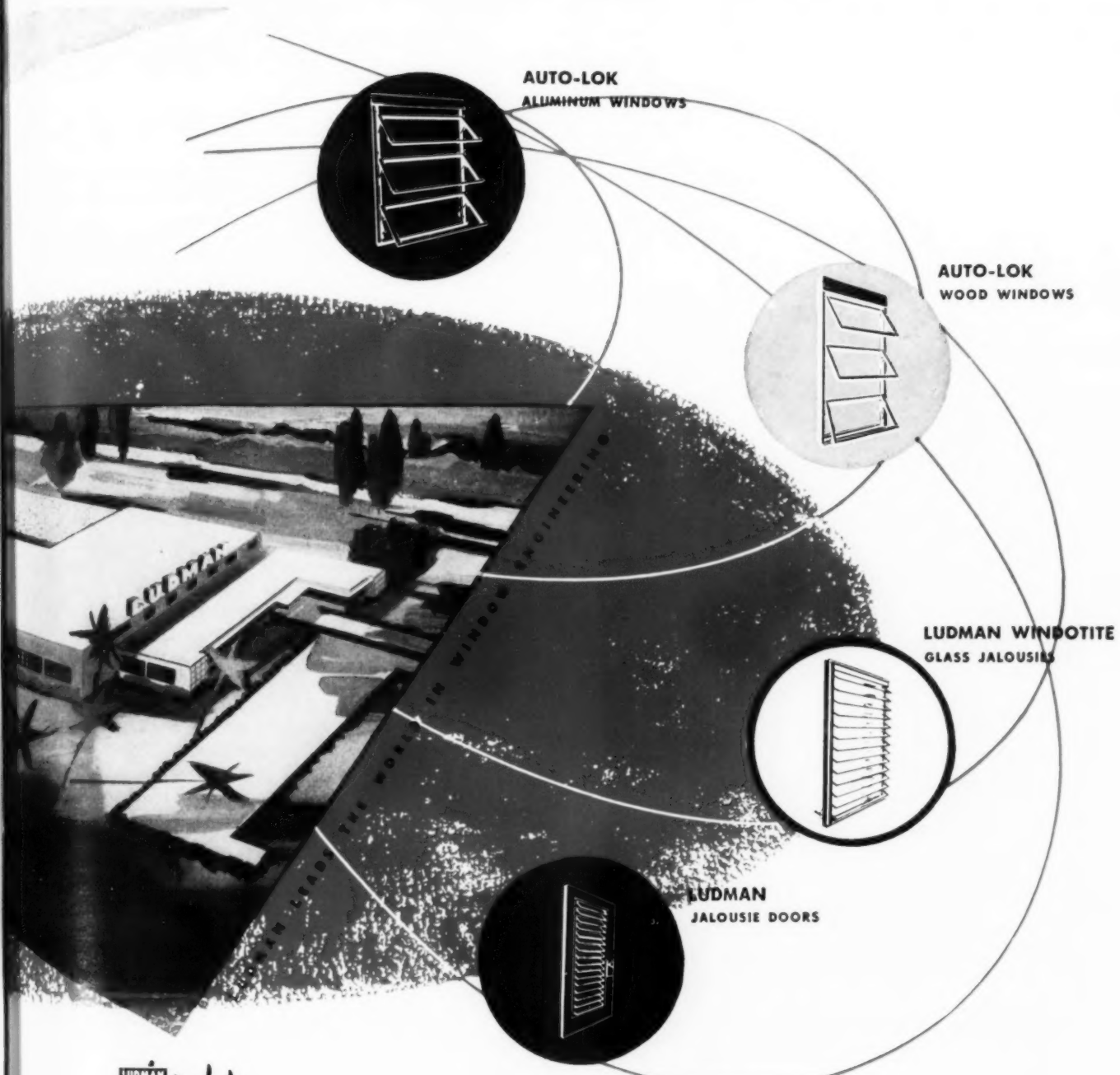
George W. Lord of Edmonton, who was reelected as the Association's president for his second term, reported at the recent annual meeting in Banff that the organization is now the fourth largest of its kind in Canada, with a membership of 99.

Other officers elected to the executive of the association are: V. F. R. Berton of Calgary, vice president; T. Gordon Aberdeen of Edmonton, second vice president; Kelvin C. Stanley, Edmonton, secretary; and Howard L. Bouey, Edmonton, treasurer.

Miss Mary Imire, G. R. Ascher and C. S. Burgess, all of Edmonton, and W. G. Hames of Calgary were all elected to the Association's executive council.

Two architects who have been active

(Continued on page 30)



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## THE RECORD REPORTS

in architectural circles in the provinces for many years were appointed honorary members of the association. They are R. P. Blakey and Peter Rule, both of Edmonton.

### **Construction Firm Sponsors Model Building Contest**

A model building contest for architectural and engineering students has

### CANADA (Continued from page 26)

been announced by Soules Construction Ltd., Toronto, one of the nation's largest general contracting organizations. Prizes will be \$200 for first award, \$100 for second and \$50 for third, with possible additional awards for classifications which deserve special recognition.

J. M. Soules, president of the firm, stated it is "accepting for competition scale models of construction projects including industrial or commercial proj-

ects, engineering projects and town sites." The entries are to be displayed and judged at the next Canadian International Hobby Show in Toronto in February 1954.

Entries will be judged on the basis of interest, detail, accuracy and workmanship. The models are to depict projects while under construction, and unless special application is made beforehand, they must not exceed a total display area of 20 sq ft. The rules of the contest are available upon request from Soules Construction Ltd., 880 Bay Street, Toronto.

### **New National Building Code: Safety Standards Published**

The first part of the new National Building Code to be published has been issued in pamphlet form. It is the Canadian Code of Construction Safety Measures, prepared by the Associate Committee on the National Building Code as Part VIII of the National Building Code (1953). Copies are available from the National Research Council, Ottawa, at ten cents each.

The pamphlet contains 14 sections, covering the whole field of construction safety practice, including housekeeping, hoists and elevators, scaffolds and first aid. A special section deals with demolition. Periodic revisions are planned.

The need for a part of the Code to deal with construction safety measures was first suggested to the Committee at one of its annual Building Officials Conferences. The work of preparing it was the responsibility of a special committee under the chairmanship of Albert Deschamps, engineer and contractor of Montreal, a past president of the Canadian Construction Association.

Remaining sections of the new National Building Code are expected to be ready for distribution almost immediately. The revised code will supplant the present National Building Code, first published in 1941 and used by some 140 municipalities either directly or as a reference document.

### **Defense Building Decline Forecast for Next Year**

R. G. Johnson, president of Defense Construction, Ltd., expects a lower total volume of defense building in 1953-54 than in the current year.

Speaking at the recent annual convention of the Canadian Construction Association in Montreal, Mr. Johnson said

(Continued on page 32)



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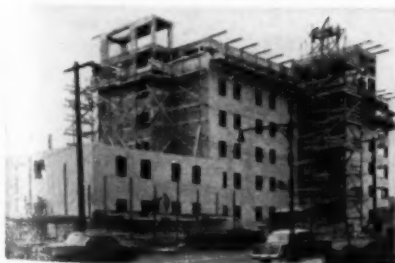
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## 20,000 FEET OF QUALITY



**NEW HOSPITAL**, located in Forest Hills, Long Island, New York, is scheduled for completion in September, 1953. Pomerance & Breines, Architects.

The new hospital of the Forest Hills Foundation (shown under construction at left) is being built to last. To keep maintenance expenses low and fulfill life expectancy of the building, plumbing contractor William Crossberg, Inc., chose ANACONDA 85 Red Brass Pipe to fill the architect's specifications for hot and cold water supply lines.

Twenty thousand feet of it—in standard sizes ranging from ½ in. to 4 in.—will be installed in this 6-floor, 150-bed hospital. With ANACONDA 85 Red

Brass Pipe, the Forest Hills Foundation can count on a trouble-free supply of water for years and years to come. *The American Brass Company, Waterbury 20, Connecticut. In Canada: Anaconda American Brass Ltd., New Toronto, Ont.*

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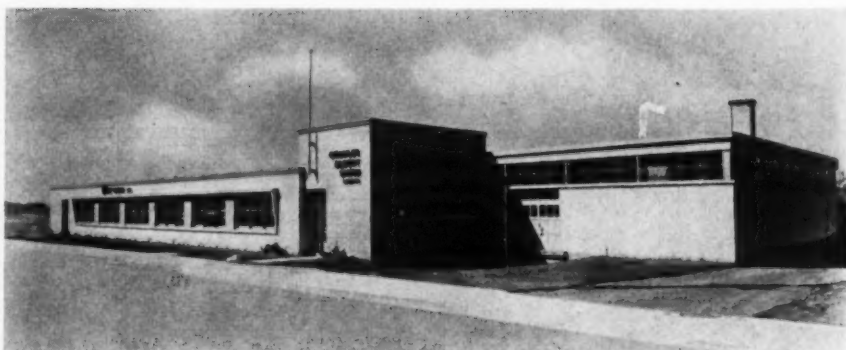
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## THE RECORD REPORTS

### CANADA

(Continued from page 30)

his own guess is that defense building is now at its period of peak activity. Since 1951, the year of its establishment, DCL has administered nearly \$450 million worth of construction, involving over 1200 contracts.



Erwin Bamberger was architect for this small factory building for Charles Albert Smith Ltd. of Montreal

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In the same talk, Mr. Johnson also discussed some of the more interesting engineering features of DCL projects. "Our 160-ft span concrete arch hangar," he said, "has a poured-in-place, thin-shelled area, supported on concrete ribs. A prestressing system is used to take the thrust of the arch at ground level. The arch is poured on traveling plywood forms. The same hangar is also being standardized in steel with I-beam arches of unusual and economic design."

Describing another type of structure, previously unknown in Canada and called a "cantilever hangar," Mr. Johnson said that it featured a central concrete structure which constitutes the workshop section and from which is projected on either side a 120-ft steel cantilever.

"This design," he reported, "provides the maximum in flexibility, because building designers have an almost hopeless task trying to keep ahead of aircraft designs." Structures of this type are under construction at Greenwood, N. S.; Uplands, Ont.; Winnipeg, Man.; Namao and Cold Lake, Alta.; and Comox, B. C.

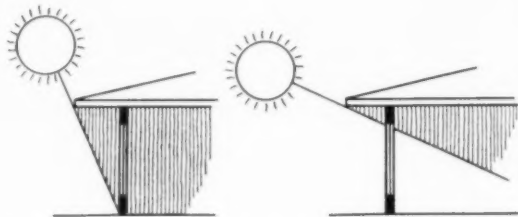
Another structure described by Mr. Johnson as the first of its kind in Canada is a 120-ft-span precast concrete arch hangar which he said has been tested at Comox, B. C., and found satisfactory. He also noted that an R.C.A.F. supply depot now being erected at Namao, Alta., would be the largest building in Canada featuring precast concrete roof slabs and beams, and that DCL currently has Canada's largest prestressed concrete building under construction at Cobourg, Ont.

(Continued on page 35)



## SOUTH WINDOWS

To make maximum use of solar heating in winter, the house should be laid out along an east-west axis, with large windows facing south. This brings in the low winter sun for fuel savings and comfort. South windows are easily protected from high summer sun by a roof extension (so designed that the low winter sun enters under it). The diagrams below show how this works. Most architects and engineers are equipped with the necessary guides for designing correct shading devices for various latitudes.



Sun angle on June 21.

Sun angle on December 21.



This exterior view shows how Architect Welch provided a roof overhang to shade south windows from the sun in summer.

## WEST WINDOWS

West windows must be more carefully considered than those on other elevations. Due to the buildup of heat through a hot summer day and the fact that the west elevation is exposed to the low afternoon sun, heat transmission through west windows can place a great load on the air-conditioning system. There are several possible ways to handle the west elevation problem:



1. Some architects and builders solve this problem by placing the porch, garage, carport or utility room on this side of the house.
2. If there are large trees on the site (or if they can be added) to shade west windows, the problem is solved by nature. The leaves provide summer shade—the bare branches let the welcome winter sun come through.
3. Heat absorbing glass is an effective means of decreasing solar

heat gain. This blue-green glass is made with a special chemical composition which enables it to absorb solar energy. Much of this heat is dissipated back outdoors, so that less load is thrown on cooling equipment. For best results in west windows, therefore, *Thermopane* should have heat absorbing glass as the outer pane. This heat absorbing *Thermopane* reduces the heat gain through west windows approximately 50% as compared to single-pane, clear glass windows. This has been determined by calculations made for west windows at 4:00 P.M. in summer, when the sun is considered to be at its worst angle. By reducing the cooling load, heat absorbing *Thermopane* may even reduce the size of the air-conditioning equipment required for the home.

## EAST AND NORTH WINDOWS

North windows rarely present a problem of radiant heat gain. Windows in the eastern elevation, if exposed to the morning sun, may require shading as suggested for western windows. An engineer's or architect's recommendations should be obtained on this.

## TYPES OF SASH TO USE

Some architects and builders employ fixed sash in air-conditioned homes, relying on the heating and air-conditioning system to provide ventilation. In some cases, louvers or other kinds of openings are used for supplementary ventilation. Fixed sash are usually economical and they do away with the need for insect screens in windows. Standard picture window and window wall frames are available from a number of manufacturers through their dealers—frames of wood or metal. These frames take standard sizes of *Thermopane* insulating glass which is readily available from L·O·F Distributors and Dealers.

However, many people will insist upon having ventilating sash in their homes for psychological reasons and

because they may want to use natural ventilation in the more moderate seasons of the year. Their preferences can be satisfied with ventilating sash which take standard *Thermopane* units. These sash, of wood or metal, are available in all common types. Your L·O·F Glass Distributor or Dealer can furnish information about them and about standard *Thermopane* units for them. Or, write us if you wish more complete information on *Thermopane*, its standard sizes and types of sash for it.

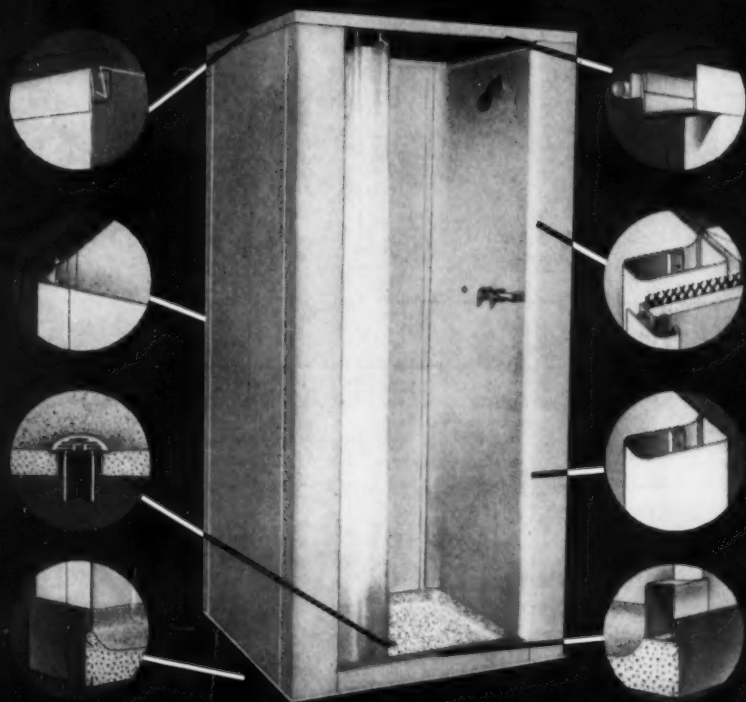
These two pages are a condensation of a brochure that covers the entire subject more fully with additional technical supporting data. We shall be pleased to have you write for a copy of "Glazing the Air-Conditioned Home".

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## THE RECORD REPORTS

### CANADA

(Continued from page 32)

### Cost Stabilization Called Vital to Building Increase

With construction contract awards in the first two months of 1953 running 29 per cent below last year, building industry leaders are stressing the necessity for stabilizing costs to help effect a greater volume of activity.

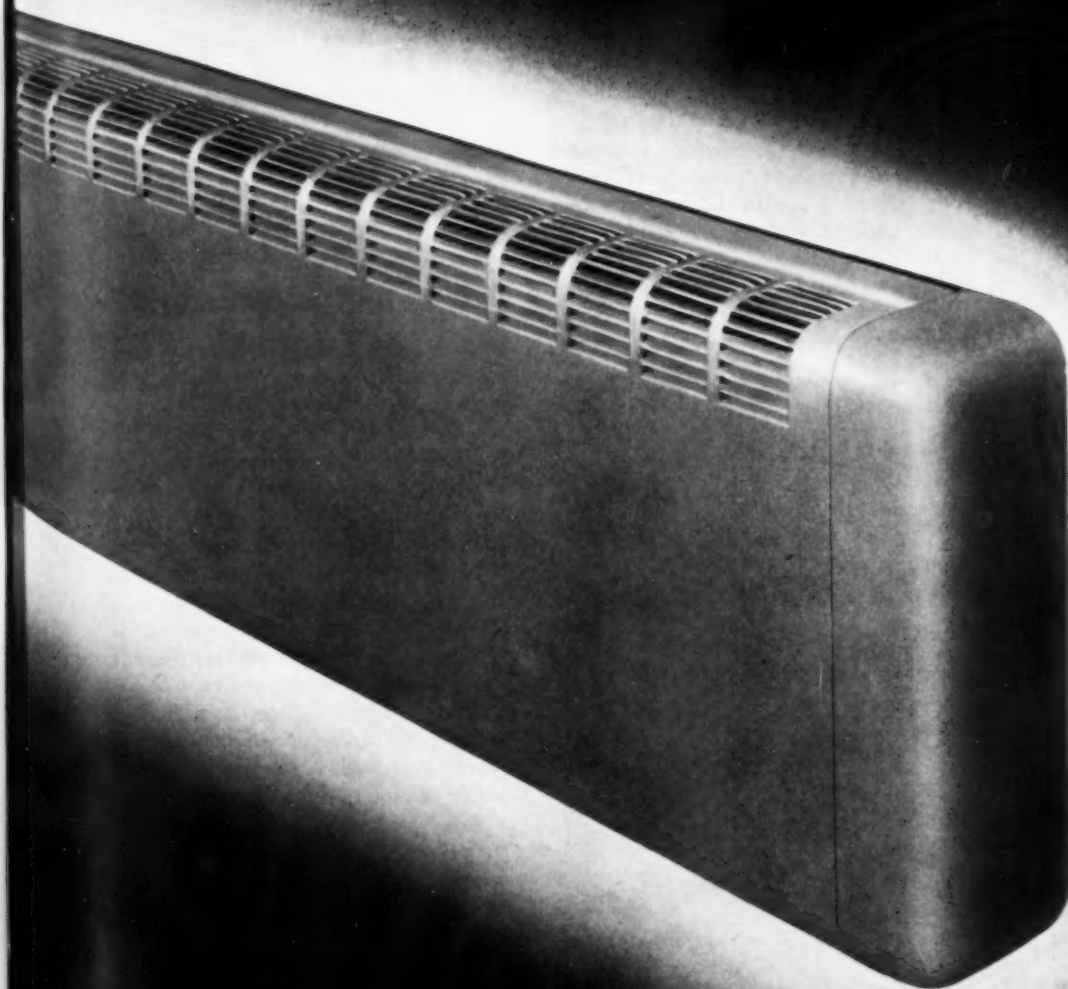
In a recent talk to the Toronto Builder's Exchange, John N. Flood, president of the Canadian Construction Association, said he felt prospects for increased volume of new buildings this year are "reasonably bright," backed up by the Federal Government estimate for \$4.4 billion total construction volume. However, he said, the increased investment was anticipated largely on the basis of commercial construction, due to better availability of mortgage funds and removal of deferred depreciation regulations and steel controls. These effects were primarily of short-run nature, and demand in both categories of construction would be extremely sensitive to higher costs, in his opinion.

Referring to current wage negotiations, Mr. Flood asserted that "without an offsetting gain in productivity, demands for higher wage rates will only lead to a reduction in the potential volume of work and decreased employment opportunities."

He advocated a return to firm price quotations by building material manufacturers and contractors, with keen competition and scheduling operations to help stabilize construction costs.



For his own house, Architect A. Bruce Etherington of Oakville, Ont., has used concrete block cavity-wall construction; wood is stained to harmonize with setting.



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### FROM "CMP" TO "DMS": FAREWELL TO PERMITS

THE "DEFENSE MATERIALS SYSTEM" will succeed the Controlled Materials Plan on July 1—and CMP will join M-4A, M-4, and L-41 of World War II, in welcome limbo.

DMS, to be administered by the National Production Authority, pro-

vides a priority system to funnel supplies of materials and products to military and atomic producers and builders after July 1; at the same time priority and allotment authority for civilian and defense-supporting producers and builders ends. In other words, no permits, no allocations; if you can find the material, you can buy it.

The exception to general decontrol of

civilian production and building: the government will continue to allocate to everyone nickel-bearing stainless steel and certain alloy steels containing nickel, cobalt and a few other alloying metals—still very scarce.

### SOME INCREASES FOLLOW END OF PRICE CONTROLS

PRICE BOOSTS in such building materials as cement, brick and gypsum products were registered in the first weeks following the end of government price controls. These reflected adjustments to increased costs not previously balanced by price rises.

The last of a series of seven decontrol orders by the Office of Price Stabilization freed steel on March 17. The outlook on steel prices was for stability if the steel industry could possibly manage it. Although steel companies feel increased costs provide economic justification for higher prices, they are reported as determined to avoid if possible any action that might embarrass the Eisenhower Administration. In addition, they fear the repercussions of price rises on this month's wage talks with the United Steelworkers.

### COORDINATING BOARD FOR FEDERAL BUILDING URGED

THE AMERICAN INSTITUTE OF ARCHITECTS has recommended to the White House the formation of a "coordinating body" for all federal construction work except military and defense, which it considers are already pretty well coordinated in the office of the Defense Department's Director of Installations, Frank R. Creedon.

The recommendation was made on the advice of A.I.A. Executive Director Edmund Purves in a resolution passed by the A.I.A. Board of Directors at its March meeting in Washington.

The resolution read as follows: "That the American Institute of Architects recommend that, with the exception of defense or military construction, there be a coordinating body in the federal governmental structure for all other construction programs, and that the board be set up in the Executive Office of the President and be reflected in the Bureau of the Budget."

(Continued on page 298)



#### 1. Your RCA Sound Distributor

For expert, "no obligation," planning assistance, you'll find your RCA Sound Distributor is the man to know.

He can offer you advice on the latest in equipment, the newest in sound techniques. His experience covers a wide range of applications including schools, plants, hospitals, hotels, institutions, and stores.

Call on him for the answer to any question involving sound.

#### 2. New RCA Sound Products Catalog

Here, in easy-to-find form is the full line of RCA Sound Products.

In 17 pages, you'll find helpful data on RCA sound equipment from microphones to large sound system centers. Get this booklet for your files. It's a handy reference for any sound job you may tackle.

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Radio Corporation of America, Camden, N. J.

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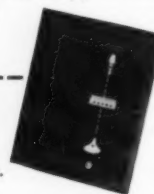
Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_



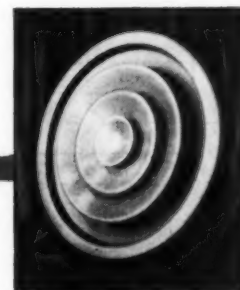
**RADIO CORPORATION of AMERICA**  
SOUND PRODUCTS CAMDEN, N.J.



**THE BEAUTIFULLY STYLED**

# Aerofuse Type 'P' Series

## CEILING DIFFUSER



Aerofuse — a famous name in ceiling diffusers — is now presented in an entirely new design that sets a new high in appearance and performance at the vital point of air delivery.

**Beautifully styled**, the four diffuser types in the new Aerofuse line have matching facial contours, smooth, graceful lines that harmonize with modern interior design and decor. An important feature of the Type "P" Series, all diffusers have the identical number of concentric rings. Thus when requirements call for the installation of more than one Aerofuse type — or more than one size — in the same area, you can be sure of uniform appearance.

**Engineered** to meet rigid specifications of efficient, satisfactory performance, each diffuser type in the new Aerofuse line is designed for a

specific air delivery job. Outstanding is the Type "PA" adjustable diffuser designed so that air distribution pattern may be varied from horizontal to vertical by turning center cup . . . Type "PF" is a flush mounted, fixed pattern diffuser . . . Type "PS" is a slightly stepped-down high capacity diffuser for industrial applications . . . Type "PR" is a flush type, supply and return diffuser.

**New Catalog No. 105** contains complete description of the Aerofuse Type "P" Series, size selection information, and engineering data. Write for your copy today to Tuttle & Bailey, Inc., New Britain, Conn.

TUTTLE & BAILEY inc

# THE RECORD REPORTS

## CONSTRUCTION COST INDEXES

### Labor and Materials

United States average 1926-1929 = 100

Presented by Clyde Shute, manager, Statistical and Research Division, F. W. Dodge Corp., from data compiled by E. H. Boeckh & Assocs., Inc.

#### NEW YORK

#### ATLANTA

Period	Residential		Apts., Hotels Office Bldgs. Brick and Concr.	Commercial and Factory Bldgs. Brick and Concr.		Residential	Apts., Hotels Office Bldgs. Brick and Concr.	Commercial and Factory Bldgs. Brick and Steel	
	Brick	Frame		Brick	Steel			Brick	Frame
1930	127.0	126.7	124.1	128.0	123.6	82.1	80.9	84.0	86.1
1935	93.8	91.3	104.7	108.5	105.5	72.3	67.9	95.1	87.1
1939	123.5	122.4	130.7	133.4	130.1	86.3	83.1	96.9	97.4
1940	126.3	125.1	132.2	135.1	131.4	91.0	89.0	136.8	98.5
1946	181.8	182.4	177.2	179.0	174.8	148.1	149.2	158.1	136.4
1947	219.3	222.0	207.6	207.5	203.8	180.4	184.0	178.8	157.1
1948	250.1	251.6	239.4	242.2	235.6	199.2	202.5	180.6	178.8
1949	243.7	240.8	242.8	246.4	240.0	189.3	189.9	185.4	180.8
1950	256.2	254.5	249.5	251.5	248.0	194.3	196.2	204.2	183.7
1951	273.2	271.3	263.7	265.2	262.2	212.8	214.6	88.6	202.8
1952	278.2	274.8	271.9	274.9	271.8	218.8	221.0	212.8	210.1
Dec. 1952	277.7	274.1	273.8	276.1	273.6	220.3	222.6	215.7	212.7
Jan. 1953	278.4	275.0	274.0	277.6	273.8	220.4	222.7	215.9	214.3
Feb. 1953	278.2	274.8	273.7	277.4	273.6	220.2	222.5	215.6	214.1
Feb. 1953	125.3	124.5	109.4	107.9	110.3	155.2	167.7	126.7	119.8

#### ST. LOUIS

#### SAN FRANCISCO

1930	108.9	108.3	112.4	115.3	111.3	90.8	86.8	100.4	104.9
1935	95.1	90.1	104.1	108.3	105.4	89.5	84.5	96.4	103.7
1939	110.2	107.0	118.7	119.8	119.0	105.6	99.3	117.4	121.9
1940	112.6	110.1	119.3	120.3	119.4	106.4	101.2	116.3	120.1
1946	167.1	167.4	159.1	161.1	158.1	159.7	157.5	157.9	159.3
1947	202.4	203.8	183.9	184.2	184.0	193.1	191.6	183.7	186.8
1948	227.9	231.2	207.7	210.0	208.1	218.9	216.6	208.3	214.7
1949	221.4	220.7	212.8	215.7	213.6	213.0	207.1	214.0	219.8
1950	232.8	230.7	221.9	225.3	222.8	227.0	223.1	222.4	224.5
1951	252.0	248.3	238.5	240.9	239.0	245.2	240.4	239.6	243.1
1952	259.1	253.2	249.7	255.0	249.6	250.2	245.0	245.6	248.7
Dec. 1952	259.5	252.3	253.7	259.5	253.6	249.9	244.4	248.0	251.2
Jan. 1953	260.2	253.2	253.4	260.7	253.8	252.1	246.5	250.1	254.1
Feb. 1953	260.3	253.3	253.7	261.4	253.9	251.9	246.3	249.8	253.9
Feb. 1953	136.2	136.7	115.0	118.2	113.4	138.5	148.0	112.8	108.3

The index numbers shown are for combined material and labor costs. The indexes for each separate type of construction relate to the United States average for 1926-29 for that particular type — considered 100.

Cost comparisons, as percentage differences for any particular type of construction, are possible between localities, or periods of time within the same city, by dividing the difference between the two index numbers by one of them; i.e.:

index for city A = 110  
index for city B = 95  
(both indexes must be for the same type of construction).  
Then: costs in A are approximately 16 per cent higher than in B.

$\frac{110-95}{95} = 0.158$   
Conversely: costs in B are approximately 14 per cent lower than in A.  
 $\frac{110-95}{110} = 0.136$

Cost comparisons cannot be made between different types of construction because the index numbers for each type relate to a different U. S. average for 1926-29.

Material prices and wage rates used in the current indexes make no allowance for payments in excess of published list prices, thus indexes reflect minimum costs and not necessarily actual costs.

These index numbers will appear regularly on this page.



# U·S·S 17 (Type 430) Stainless Steel with other materials—highlight this new technical center

Now being completed for National Malleable and Steel Castings Company, Cleveland, Ohio, this combination office and laboratory building demonstrates how effectively insulated panels of U·S·S 17 (Type 430) Stainless Steel can be combined with other wall materials.

In many previous applications, insulated Stainless Steel panels covered the entire exterior wall surface of the buildings, but here the architects have used this modern material in conjunction with face brick, glass block and heat-absorbing corrugated glass.

The new National Technical Center—with 18,400 square feet of office area and 14,012 square feet of laboratory area—is of concrete and steel frame construction. Stainless Steel panels cover approximately 9,000 square feet of surface.

Since the structure is completely air-conditioned, the low heat transmission coefficient ("U" factor) of these insulated panels is extremely important. And insulated panels of Stainless Steel have a host of other advantages to recommend them—striking beauty, superior corrosion resistance, freedom from costly maintenance, quick erection without regard to weather conditions, and an initial cost well in line with comparable materials.

For full information on this modern material of construction, send for our new book containing the latest data on construction with panels of U·S·S 17 Stainless Steel. Use the coupon below.



**EVEN SEVERE WINTER WEATHER** didn't halt erection of Stainless Steel panels on this laboratory and office building. Fast erection without regard to weather conditions is only one of the advantages of this type of construction.

## U·S·S STAINLESS STEEL



SHEETS • STRIP • PLATES • BARS • BILLETS  
PIPE • TUBES • WIRE • SPECIAL SECTIONS

United States Steel Corporation  
525 William Penn Place, Room 2811-V  
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- ☐ Please send me your new booklet on U·S·S 17 Stainless Steel for industrial buildings.
- ☐ Please arrange to have fabricators of Stainless Steel wall panels send me literature on their particular type of construction.

Name ..... Title .....

Address .....

City ..... State .....

United States Steel produces only the Stainless Steel sheet and strip from which panels of this type are made; the panels themselves are fabricated by a number of our customers.

UNITED STATES STEEL CORPORATION, PITTSBURGH • AMERICAN STEEL & WIRE DIVISION, CLEVELAND • COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO  
NATIONAL TUBE DIVISION, PITTSBURGH • TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA. • UNITED STATES STEEL SUPPLY DIVISION, WAREHOUSE DISTRIBUTORS  
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

3-801

UNITED STATES STEEL

# REQUIRED READING

## URBAN REDEVELOPMENT

*The Future of Cities and Urban Redevelopment. Edited by Coleman Woodbury. The University of Chicago Press. (5750 Ellis Ave., Chicago 37, Ill.) 1953. 764 pp.*

*Urban Redevelopment: Problems and Practices. Edited by Coleman Woodbury. The University of Chicago Press. (5750 Ellis Ave., Chicago 37, Ill.) 1953. 524 pp.*

REVIEWED BY JOHN RANNELLS, A.I.A.

The Future of Cities is a mighty important subject; it has been approached with full appreciation of its importance in the two bulky volumes which resulted from the Urban Redevelopment Study (hereafter U.R.S.) organized in 1948 and financed by a substantial grant from the Spelman Fund of New York. The study was carried out under the supervision of the directors of: Public Administration Clearing House; American Society of Planning Officials; National Association of Housing Officials; City Planning Department of Los Angeles; Cleveland Metropolitan Housing Authority<sup>1</sup> and Coleman Woodbury, Professor of Regional Planning at Harvard, as editor and contributing author.

<sup>1</sup>Their names in the same order: Herbert Emmerich; Charles B. Bennett; Walter H. Blucher; Robert D. Sipprell (to Jan. 1949) and John M. Ducey (1949-1951) for NAHO; Ernest J. Bohn.

These auspices account, no doubt, for the diversity of approaches to the whole redevelopment question to be found in these volumes and the consequent lack of a unified conceptual framework. Perhaps this is just as well, for the field is huge and varied and it probably doesn't matter just where we first break into it so long as we get acquainted, at least, with the entire subject and inform ourselves adequately in those parts of it that concern us most. The entire field is well covered in these volumes—the second has more to do with background and objectives; the first, with techniques. Both are complete in themselves. In fact each of the eleven parts making up these books is a separate work in the series and might have been published as an independent monograph. It is well, however, that they are all gathered in one big double-barreled publication, for together they support and explain each other and constitute the most comprehensive study of urban redevelopment undertaken so far.

The first volume, "Problems and Practices," consists of six monographs based on actual experience and dealing with major operating problems and methods. "It is," says the advertisement, "an essential guide for all persons working in redevelopment programs or directly concerned with them." True enough, provided these persons come equipped with knowledge of the background and difficulties and some firm

concepts of the goals which are covered in the second volume. These are all implied and frequently interspersed throughout the six monographs which constitute this first volume, but one coming to this field relatively "cold" should start with the second.

The following listing and brief comments will show how the six monographs of the "problems and practices" volume come to grips with the challenge of urban redevelopment.

1. "Measuring the Quality of Housing in Planning for Urban Redevelopment" by Alan A. Twichell is a resume and confirmation of the familiar "Appraisal Method" which Mr. Twichell was instrumental in developing while technical secretary of the American Public Health Association's Committee on the Hygiene of Housing "as a yardstick for health officers, housing officials and planners." It removes unsupported opinions from the inevitable controversies on "blight" or "slums" in planning or housing programs and puts the entire question on a basis of acknowledged facts.

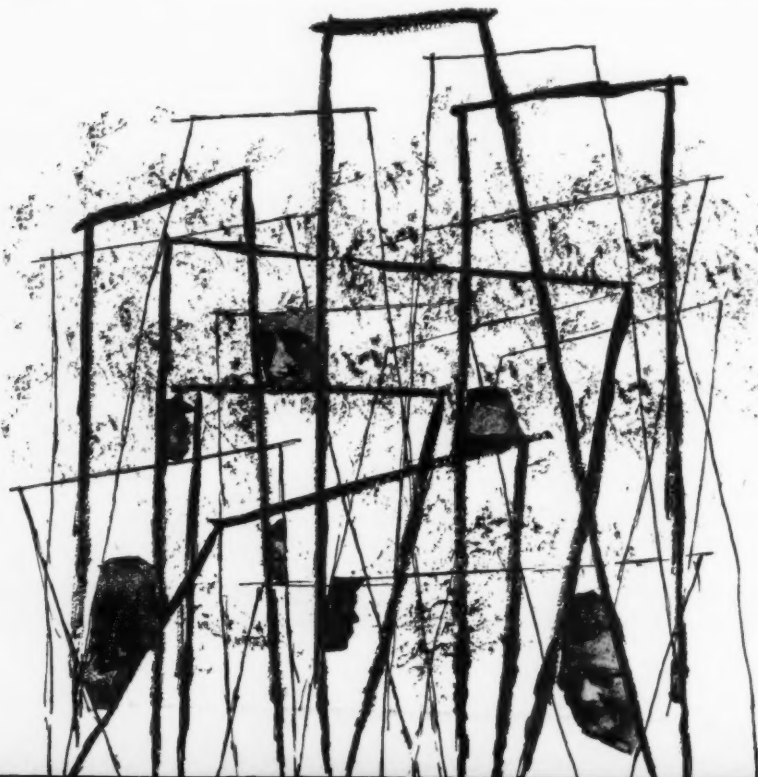
2. "Urban Densities and Their Costs: An Exploration into the Economics of Population Densities and Urban Patterns" by William H. Ludlow makes a strong start toward putting this hazy subject on the same sort of factual basis as the study of quality of housing was achieved. It is focussed mainly on housing layout. (Medium densities result in the lowest costs for municipal services.)

3. "Private Covenants in Urban Redevelopment" by Charles S. Ascher reviews the legal background of protective covenants and the experience of twenty years in Radburn, New Jersey where a scheme of covenants has served as the basis for an "extra-Municipal Government by Contract."

4. "Urban Redevelopment Short of Clearance: Rehabilitation, Reconditioning Conservation and Code Enforcement in Local Programs" by William L. Slayton goes into enforcement and conservation with their administrative problems and reviews experience by both methods in several cities.

5. "Relocation of Families Displaced in Urban Redevelopment Experience in Chicago" by Jack Meltzer with the assistance of Sheila Orloff describes

(Continued on page 48)



# Rolling Steel

# DOORS

*Manually, Mechanically, or Power Operated*

A good, quick opening, quick closing, power operated rolling steel door offers more desirable features than any other type of door. The vertical roll-up action of a rolling steel door utilizes no usable space either inside or outside the opening . . . there are no overhead tracks or other obstruction to interfere with crane operations. No other type of door offers these inherent advantages of space economy and compactness in operation. In addition, rolling steel doors are permanent—their all-metal construction assures you a lifetime of trouble-free service, and provides maximum security against intrusion and fire. When you select a rolling steel door, check specifications carefully . . . you will find many extra-value features in Mahon doors—for instance, the galvanized steel material, from which the interlocking curtain slats are rolled, is chemically cleaned, phosphated, and treated with a chromic acid solution to provide paint bond, and, the protective coating of synthetic enamel is baked on at 350° F. prior to roll-forming. See Sweet's Files for complete information including Specifications, or write for Catalog G-53.

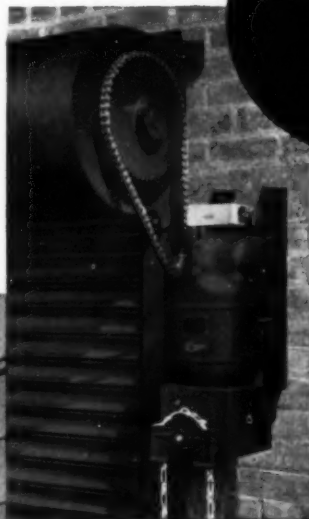
## THE R. C. MAHON COMPANY

Detroit 34, Michigan • Chicago 4, Illinois • Representatives in all Principal Cities

Manufacturers of Rolling Steel Doors, Grilles, and Automatic Closing Underwriters' Labeled Rolling Steel Doors and Fire Shutters; Insulated Metal Walls and Wall Panels; Steel Deck for Roofs, Partitions, and Permanent Concrete Floor Forms.



MAHON  
CHAIN-GEAR  
OPERATOR



MAHON STANDARD  
POWER OPERATOR 920-P



ROLLING STEEL DOORS, SHUTTERS AND GRILLES TO MEET EVERY REQUIREMENT

Three of fifteen Mahon Rolling Steel Doors installed in a large midwest foundry. Spence Brothers, Saginaw, Mich., Gen'l Contractors.

# MAHON



Durability plus customer appeal...

that's the beauty of

**Higgins Block**<sup>\*</sup>  
INC.



James McBride reports great success with Higgins Block in the Culmore Apartments near Washington, operated by Jno. N. Campbell, Inc. Installation costs were low, reaction from renters enthusiastic.



Hard wear goes with a Boy's Club auditorium (this one in Waltham, Mass.) the way ham goes with eggs—but so does tough, durable Higgins Block. Thomas Worcester, Inc., were the architects.



What other floor gives you such beauty plus all these advantages!

**\* SPECIFICATIONS:**

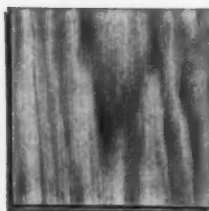
9" x 9" net face hardwood blocks — easy to install  
3-ply cross-grain construction—when properly installed will not warp, buckle, cup or crack  
Selected oak face — ready finished  
Pressure bonded with marine-type glue — water-proof, climate-proof

Toxic impregnated — rot-proof and termite-proof  
Grooved back anchors into adhesive — quiet and comfortable  
Can be laid without special preparation on concrete slab — ideal for radiant heat  
Blocks fit flush—without large, visible V-grooves

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Address.....  
City..... Zone..... State.....

## REQUIRED READING

(Continued from page 46)

Chicago's relocation activities and the administrative machinery involved.

6. "Eminent Domain in Acquiring Subdivision and Open Land in Redevelopment Programs: A Question of Public Use" by Ira S. Robbins and Marian Perry Yankauer reviews the legal basis for acquiring land by the state for the purpose of improving living conditions and eliminating blight. The authors make a strong case for "condemnation of open and predominantly open land needed for sound community growth."

Here, indeed, is a solid group of studies on *pratique*! But what of the climate in which these problems grew or the context in which their solutions are to be achieved? Only the first and fourth of these monographs pays much attention to these matters. One must go to the other collection for any full understanding of them.

The second volume "Future of Cities" is mainly concerned with "underlying factors in urban growth and development that have helped to produce the problems now faced by redevelopment agencies and on which some substantial changes in public understanding and policy would seem to be required if the long-term objectives of redevelopment are to be realized." Questions of objectives and values are discussed at length in the first and last sections. The following listing and comments will show the extent of the coverage:

1. "Essays on Redevelopment: Goals, Designs and Strategy" by six authors with quite-varied points of view.

Catherine Bauer leads off with a realistic review of redevelopment, especially as centered around the Federal Programs in the Housing Acts of 1937 and 1949 and the stimulus Title I of the latter has had on local planning. She shows how limited the slum-clearance approach is when taken by itself and problems of urban decentralization are not taken into account.

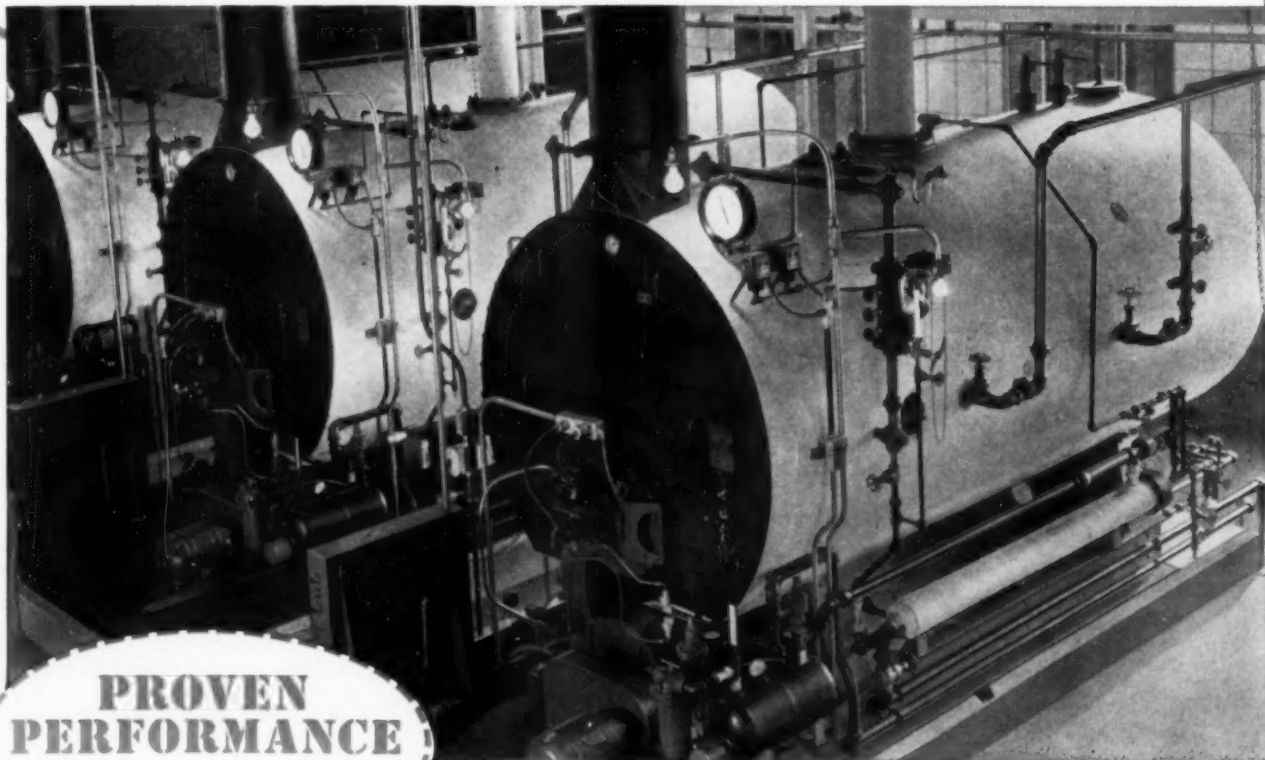
G. Holmes Perkins continues with a hopeful picture of "The Regional City." *New Towns* are the answer to our troubles, says he, but he does not present figures to support his forecast.

Henry S. Churchill asks "What Kind of City Do We Want?" with a realistic understanding of the diversity that modern life requires and how much of it is supplied only in our cities.

Robert C. Weinberg evaluates the "Design Element in Large-Scale Planning," pointing to the need for positive directives, not negative controls, with

(Continued on page 364)

# Cleaver-Brooks boilers save \$25,000 per year for Hoosac Mills...pay for themselves in 2 years' time!



## PROVEN PERFORMANCE

ANOTHER OUTSTANDING REPORT  
FROM A CLEAVER-BROOKS  
OWNER

After installation and starting service was completed, a check was made on boiler output. Tests indicated efficiency exceeded the guaranteed 80%. After eight months' operation without tube cleaning, stack temperature showed no noticeable gain, indicating high efficiency had been maintained. Planned and installed by Frank I. Rounds Co., Newton Highland, Mass.

INSTALLING 3 Cleaver-Brooks self-contained boilers at Hoosac Textile Mills, New Bedford Division, was a major step in ending boiler worries. Hoosac can count on yearly savings of \$25,000, and they're set up for future expansion as well.

Before deciding what type of boilers to install for replacing old, hand-fired boilers, Hoosac carefully considered these factors:

1. Efficiency of steam generation — the cost for supplying 12,000 lbs. of steam required each hour at peak capacity for heating and processing.
2. Saving labor costs — through safe, automatic operation.
3. Cleanliness — important to textile manufacture.

A study of past performance and prominence of similar units in the industry — showed that Cleaver-Brooks self-contained boilers would fill the bill.

Guaranteed 80% thermal efficiency was one of many influencing

factors in selecting the 3 Cleaver-Brooks 150 hp. boilers. Even with loads as low as 30% of rating, these boilers operate with a flat 80% efficiency. (Hoosac operates their plant over widely fluctuating loads, particularly in summer.)

That they attained their objectives is borne out by these results — *results which showed the boilers paid for themselves in 2 years' time.*

1. \$15,000 savings in fuel — fuel cost studies showed 275,000 gals. of oil at 5½¢ per gal. provide steam for a year's operation. Same steam formerly required 2,000 long tons of coal at \$15.00 per ton.
2. \$10,000 savings in labor costs — fully automatic operation minimized boiler maintenance. Personnel were then available for productive plant work.
3. Cleanliness — modern boiler room proved more efficient than previous cluttered arrangement. Hand firing, removal and disposal of fly-ash was eliminated.

In addition to these substantial savings, the installation provided for economical future plant expansion. At present, boiler operation is rotated so all three periodically receive the same service and maintenance.

Cleaver-Brooks boilers are showing similar savings in many other businesses. Investigate — write for Catalog AD-100 and complete information on standard size oil, gas, combination oil/gas fired Cleaver-Brooks boilers, 15 to 500 hp., 15 to 250 psi.

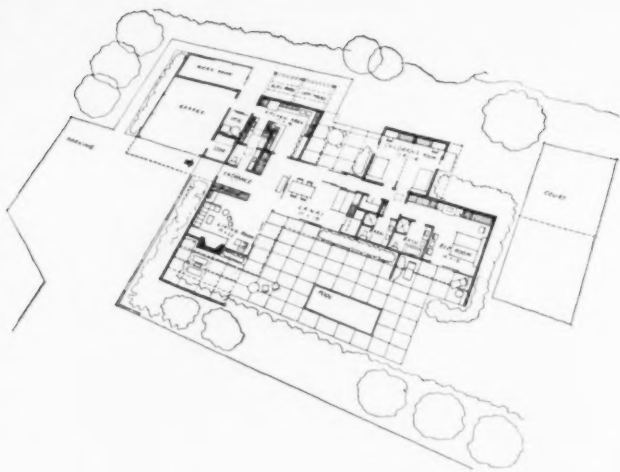
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## Cleaver-Brooks

ORIGINATORS OF  
THE SELF-CONTAINED BOILER

Steam Boilers • Oil and Bitumin Tank  
Car Heaters • Distillation Equipment  
Oil and Gas Fired Conversion Burners



## ACOUSTICAL MATERIALS AT WORK

### **MODEL HOME, Los Angeles, California**

**Architect:**

**Thornton M. Abell**

**General Contractor:**

**K. E. Griffin Construction Co.**

**Acoustical Contractor:**

**R. W. Downer Company**

New concepts in home design often call for the use of new building materials.

In this model home, for example, sound conditioning contributed importantly to the effectiveness of the open plan. Noise which might otherwise roam unchecked through the wide doorways and reflect off the floor-to-ceiling glass surfaces is absorbed by the ceiling of Armstrong's Skip-Random Cushiontone. The absence of carpeting or other sound-absorbing materials made the use of this ceiling even more important.

A new acoustical tile—Armstrong's Skip-Random Cushiontone—was the architect's choice for the job.

Like the well-known regular Cushiontone, Skip-Random is an economical, perforated wood fiber material. The major difference is in the perforations. Skip-Random Cushiontone has various sized holes, drilled within a random pattern. This design with its narrow bevels gives a ceiling an unusually attractive, "continuous" appearance . . . subdues the tile effect.

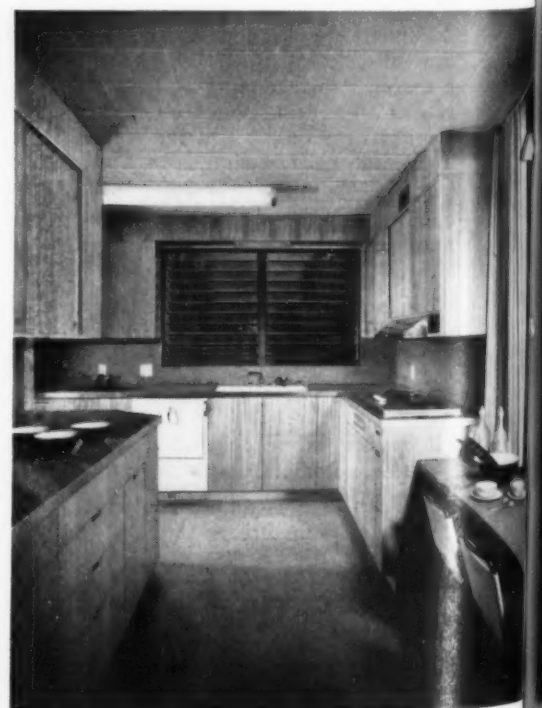
And like regular Cushiontone, the Skip-Random tile is quickly installed, easy to maintain. Its white painted surface is both washable and repaintable, has high light reflectivity.

Armstrong's complete line of acoustical materials offers a wide range of special features. Your Armstrong Acoustical Contractor will be glad to give you expert assistance without obligation. For his name and address and for the free booklet, "How to Select an Acoustical Material," write Armstrong Cork Company, 4205 Rock Street, Lancaster, Pennsylvania.

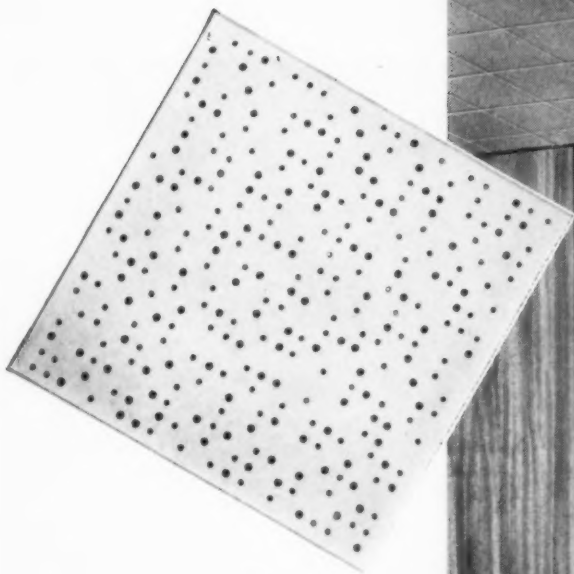
Throughout this house, sound-absorbing ceilings are ready to muffle any noise that might bounce off the many large glass partitions.



Acoustical treatment in the kitchen helps to contain the noise of kitchen activities and the clatter of utensils.





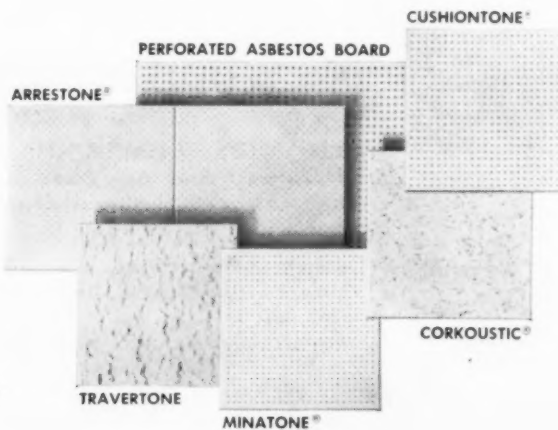


The new Skip-Random Cushiontone contains 302 cleanly drilled holes arranged in an irregular pattern. Pictures show how this design provides an unobtrusive ceiling and blends effectively with modern furnishings.

Acoustical ceilings add immeasurably to the pleasure afforded by open planning.



Halls, along with every room in this house, were treated with Skip-Random Cushiontone. Construction was simplified by the elimination of plastering.



## ARMSTRONG'S ACOUSTICAL MATERIALS



## How many catalogs do you need when writing heating specs?

WHEN YOU SPECIFY DUNHAM—you need *just one*. You don't have to wade through a *variety* of heating equipment catalogs to find what you want. Here's why:

Dunham makes a *complete line* of heating equipment for residential, industrial, commercial and institutional buildings. *One catalog*, arranged for quick specifying, con-

tains everything you need—from the simplest radiator valve to completely automatic, precision temperature control systems.

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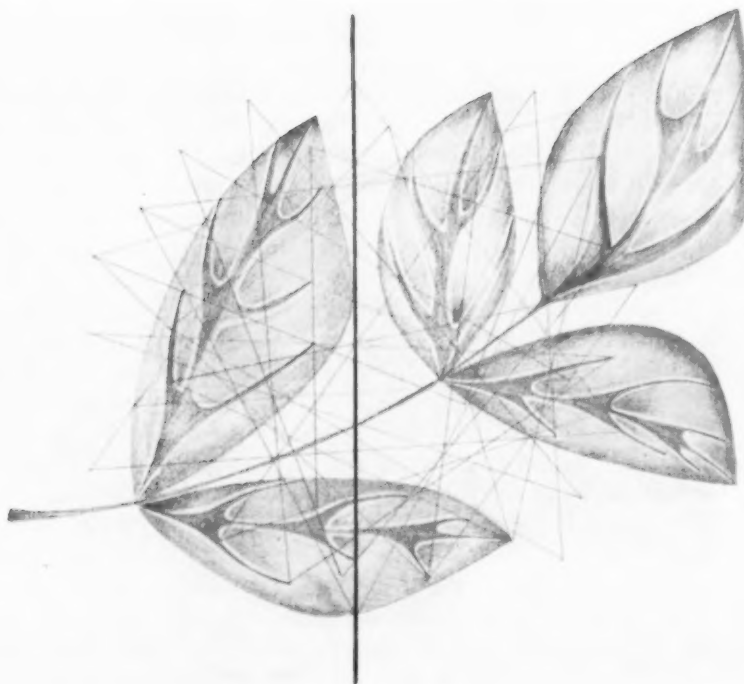
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## THE THREE LAMPS OF MODERN ARCHITECTURE

JOSEPH V. HUDNUT\*

### II. THE LAMP OF NATURE

THE CONCEPT OF PROGRESS was tinged with a naturalistic flavor almost from the date of its appearance in Renaissance thought. A belief in a continual process of human betterment could scarcely fail to invite new interpretations of nature and to encourage gradually a philosophy of naturalism in which man is conceived as an element in nature and borne forward on the great stream of nature's progress. The advances of science and technologies, the new horizons of the industrial revolutions, and the empirical view of human life in such writers as Adam Smith and Montesquieu gave an added impetus to this new faith. A tendency to look in nature for interpretations of all phenomena in human life was well developed before the advent of evolution.

Art was among the phenomena thus subject to inter-

pretation. Art was explained as a natural activity. It arises from certain peculiarities in the human constitution. The first of these peculiarities is a tendency of the human mind to attribute to nature certain values which are not in nature but which man hopes to find there. These values are consequences of his own needs. We have, for example, a need for order; we discover an order in nature. We have need of purpose; and we find purpose in sunrise and the germination of seed. We have need of divine guidance; and that, too, informs and exalts the mountains and the sea. These satisfactions are not knowledge. To suppose that they touch reality is to believe in magic. They display merely a strange phenomenon of the human mind as it is shaped by the unaccountable accidents which array the path which we must follow.

Sometimes it happens that we fail to find in the non-human world all of those values of which we have need.

\* Second of three lectures at the College of Architecture and Design, University of Michigan. Copyright 1952, University of Michigan Press



Then we may supplement this pleasing ministry of nature with objects or patterns of our own invention. Such objects or patterns are called works of art: more specifically, since art may be said to include every form of ingenuity and contrivance, works of fine art; and, since we are prompted by biological and economic necessity to make objects or patterns — for protection against cold, for hunting, for shelter, for war — these, too, may assume in our imagination qualities congenial to our emotional needs.

Thus, the artistic impulse and the works of fine art which are its consequences became at home in nature, being the creations of natural man responding to a natural impulse. A sunset and a symphony evoke and satisfy the same appetite, compounded of mental, social, and physical circumstances; and if, by chance, the Parthenon provokes an "esthetic emotion" more intense and lasting than a rose or a tree, that is because a great artist, in the first instance, has intensified in his experience and clarified in his art that value, or organization of values, which all of us have sought — without always finding — in nature. The superiority of the artist over nature lies not in a difference of material and method but in a greater solicitude for human satisfactions — a solicitude not always conspicuous in the non-human world.

Existing in nature it follows that art must be subject to nature's laws. Our understandings of these laws will give us, progressively, understandings of the laws of art; and if there should be principles which are universal in nature, these will be universal in art also.

Such a principle, it appears, is that of *organic order*. Everything that survives in nature and therefore everything that survives in art (a process of nature) is so organized in form and substance that every part, although specialized in function, operates in harmony with every other part to maintain the life of the whole. Such harmonies exist most obviously wherever there is *structure*, a word which implies an arrangement of parts, or organs, characteristic of natural things. And where such organic harmony exists there exists also, in natural objects, a harmony of outward form which invites our sympathy. A peculiarity in our organism — for we, too, are organic — projects a specific value on such works of nature and may operate also to project such a value upon works of art. We may call that value *beauty*. The leopard, being organic, is beautiful; so also is a tree, a star, a wasp, and Aphrodite rising from the sea; and so, by the same law, an organic building is beautiful.

This concept, organic order in nature, and its corollary in art, might exist independently of the concept of evolution; but it was evolution which gave both of these the scientific foundation without which they could not have gained their wide currency in architectural thought. Evolution, and especially that phase of evolutionary theory which emphasized change through adaptations or organisms to their environments, could scarcely have failed to suggest an analogy between living things and buildings. Buildings, like living things, have structure and organs which, taken together, comprise an organic

order, and this order, differing in each species of building, changes and develops under the influence of environment, of organic usage, and of a continuous process of organic invention.

A circumstance fateful to architecture is the prominence of biology in the formative stages of evolutionary theory. The transformation of nebulae into constellations and suns, of the melted earth into land and sea, of primitive law into the legal institutions of states: these are without that clearly defined and objective relation of structure to outward form which suggests a parallel between a Venus and a cathedral. We are not witnesses of evolutions in astronomy, in geology, or in human law and are persuaded of such evolutions only after investigation and reflection. The "esthetic emotion" they evoke is antecedent to this discovery, so that a causal relation between that emotion and evolutionary phenomena is neither immediate nor obvious. Animals, on the other hand, betray their structures — or essential parts of their structures — at a glance; a similarity of organism among them is established at their first movement and is confirmed by each advancement of our biological knowledge. It was that advancement which incited so many pregnant thoughts on the origin of architectural species.

When Buffon, for example, declared that the pig and the ass were practically the same animal, the essentials of each being a structural principle inherited from a common ancestor, he explained the origins of architectural styles. When Darwin suggested that the fauna of the Galapagos Islands had developed through minute genetic variations, he gave historians of art the secret, not only of Greek temple and Gothic cathedral, but of the apartment house and the housing project. When Lamarck suggested that the giraffe repeatedly stretched his neck in order to reach the highest branches of trees and that this elongation could be inherited, he provided a grateful mankind with the principle of the skyscraper. And all of these concepts and all of these principles are summed up in the phrase: *organic order*.

In architecture — or at any rate in the practice of architecture — the doctrine had need of a more specific formulation. Vitruvius had compared the human body to a building, a comparison which haunted the minds of the Renaissance architects, but it was not until the eighteenth century that a formula, practicable in design, emerged from the pages of philosophers. In the third quarter of that century, Carlo Lodoli, teaching in Venice and "setting forth his idea with an enthusiasm which bordered on frenzy," declared fitness and utility to be the only bases of expression in architecture. The architect, he tells us, must "show only that which has a definite function and which derives from the strictest necessity."

The idea was echoed throughout the nineteenth century. "The beauty of a building," wrote Schopenhauer, "lies in the obvious adaptation of every part . . . directly to the stability of the whole, to which the position, dimensions and form of every part must have so necessary a relation that . . . if any one part were

taken away, the whole would fall to pieces."

"Architecture," said Schinkel, "is the setting forth of Nature in its constructive activity."

At this point I shall introduce certain principles which appear to me to be important in the criticism of architecture and which I propose to use as standards by which to appraise the principle of organic order. And by principles I mean, not eternal and everlasting truths, but laws which seem to me to be valid in my experience. I ask: "Are these not valid also in your experience?"

Expression is the supreme law of art, and the *origin of expression is a feeling or idea which exists a priori — that is, without calculation or argument — in the mind of an artist.*

The desire of the artist to embody in color, tones, words, or constructed forms some thought or emotion which possesses him is the beginning of all art. But this desire is not the consequence of logical reasoning, or an exercise of technical virtuosity, or even of craftsmanship. It is not prompted by a desire to "create beauty" or to demonstrate the theory that form follows function. It does not arise from literary or scientific meanings and tendencies, however these may interpenetrate the color, tones, words, and constructed forms which are to receive the imprint of desire. Whatever other attributes a work of art may have, its expressive quality is always disinterested, irrational, and unpremeditated.

This is as true of architecture as of any other art. The architect discovers in his heart the solemnity and solace, in infinitely subtle gradations, that surround men as they meet in political assembly or in social intercourse. Whether they gather to worship and praise God, to advise and consult one another on matters of legislation, to formulate and administer justice, the architect knows the devotion and community of intention that lifts them out of the narrow channels of their separate lives and informs their collective thought with dignity and consequence. If they meet to see great spectacles, to commemorate a hero or an event, to work together or to play together, the architect knows the inner beauty of their congregation; and when the family gathers at its hearth, he knows also the adventure, loyalty, and tenderness that gathers there also. And whether these experiences are occasioned by insights of the human spirit or intuitions of hidden realities, or merely by peculiarities, regrettable or otherwise, in an architect's constitution they appear in the mind uninvited by argument or incantation. The source of all expression is idea or feeling.

This brings me to a second principle of criticism which I believe to be fundamental. Expression is the supreme law of art; it arises from idea and feeling which exist *a priori* in the mind of the artist; and *the process by which this feeling becomes objectified in things external to the mind is also followed without recourse to inference, reasoning, or formulae.* Those ideas and feelings from which the artistic impulse springs are, in their origins, not only independent of syllogisms, of scientific experiment and formulae, of use or ethical intention, but are equally

independent in those processes by which they inform objects, words, musical tones, colors, and the fabrics of buildings.

The artist needs no theory of design to know what colors, shapes, tones, or verbal images will best translate his heart. The dicta of esthetes may confuse him, fashion and taste may harass him, and the difficulties of his technique may defeat him, but none of these can teach him anything. An artist grows through the experience of his art and the disciplines of his sensibilities, not through logic, knowledge, or craft. When he has mastered his medium — paint, marble, or written word — he does not need to reason or remember. Nothing then stands between him and the direct expression of that which he wishes to express.

The nature of this process — this direct embodiment of feeling in things external to the mind in which they arise — is most clearly exemplified in music. Music, "unloaded with the weight of representation," is that perfect type of art toward which all other arts aspire. Here tones, rhythms, and abstract patterns receive directly and specifically the precise quality and measure of love, hope, exultation, triumph, gaiety, or fear that filled the heart of the composer, without the necessity of symbolic aid from words, without imitations of bird songs and thunderstorms, without any references whatever to philosophic principle or external fact. Music, of course, has its techniques and formalizations, but these are, with few exceptions, the avenues of feeling. They do not precede feeling, or lead up to it, but follow it as a loyal servant follows his master.

The range of expression in any art — the number and the character of the things to be expressed — is limited by the number and character of such avenues and, of course, by the specific attributes of different media. One cannot say in architecture many things which can be said in music. The expressions possible to music are defined by the peculiar capacities of tones and temporal rhythms, and the patterns of architecture are in like manner conditioned by whatever plastic shapes and spatial harmonies can be constructed by available methods. We have to imagine in the terms of our medium, to have a talent for it, to know the degree to which it is malleable to our idea. Nevertheless, the process of architectural creation does not differ essentially from the process of creation in music. There is a greater resistance in our medium, a greater admixture of irrelevancies, but in the end some movement of the mind must be impressed upon things external to the mind, whether the art is architecture or music.

Some confusion in this matter has been caused by the time element in the creative process of architecture. Although all works of art, including songs and poems, are constructed deliberately and over a period of time, a quality of premeditation and conscious control seems to be especially characteristic of the process of building. Except in schools of architecture, buildings seldom develop in fine frenzies but by slow study and calculation, by the use of intricate instruments, and by rational and patient methods to which the word *inspiration* seems

preposterous. Because each step constitutes a new situation to be faced and resolved by the intelligence, we are apt to conceive architecture as a pure product of the intelligence.

We are confused also by the fact that buildings are often built without art — I mean without the art of expression — and this encourages the notion that building and art are independent processes. But a preoccupation with fact and logical process does not prohibit a coexistent search for expression. Every architect knows that irrational preferences — for color, line, proportion, spacing — are often so intimate a part of reasoned decisions as to exist in our minds almost as elements in a single process. That is a habit of mind in all artists, but the intricacies and urgencies of the science of building make this habit seem especially characteristic of architecture. The investigations of museum experts have revealed a hundred hesitations and reworkings under the finished canvases of Velasquez and Rembrandt; Keats revised continually — and not always for its improvement — his "The Eve of Saint Agnes;" and the corrections of Beethoven made the manuscript of the *Ninth Symphony* almost undecipherable. These piecemeal methods in creation exhibit the intrusions of logic and tradition and the stubbornness of artistic techniques as clearly as do the successive studies which Bramante made for the church of Saint Peter. The difference is not in kind but in degree.

I do not imply that the idea or feeling to be expressed may not be the consequence of experiences associated with the development of buildings in their practical aspects. On the contrary such experiences often awaken the feeling to be expressed; but that, I think, is irrelevant to the act of creation. The important fact is that the architect, being an artist, has something to express and that he expresses it not by logical or scientific method but by shapes and arrangements which, however integrated to utilitarian and technological shapes and arrangements, are yet determined, so far as that is possible, by his need of expression.

Whatever is expressed, then, exists first as feeling in the mind of an artist and is then objectified in the external world by processes independent of rationalizations or of factual knowledge. These I take it are fundamental to the understanding of art. I shall now propose a third principle, more relevant perhaps to an understanding of architecture. *The expressive character of works of architecture is rooted in their mere abstract form and pattern and may be independent of all other characteristics.*

If we are receptive to an expression in architecture that expression will be known and known certainly, without leave or warrant of other knowledge. The cube will express sturdiness whatever its material or utility; the sphere, equality; the spire, aspiration; the repetition of columns, movement; the horizontal line, peace. These are embodiments of age-old feelings which architects have endlessly elaborated, refined, and consecrated by long application and renaissance. The definitions I have given only hint at the variety and subtlety of meanings which such shapes, and a thousand other shapes, may

in infinite relationships capture — and which can be captured in nothing but themselves.

I do not mean that there are in buildings no intellectual satisfactions which are independent of formal values, or that buildings may not be saturated with the delights of romance. I mean that these are not the modes which are the essential and characteristic modes of architecture. They are not the peculiar and prescriptive media of our art.

Buildings are often most eloquent to those persons who are aware only of their shapes: who know little or nothing about material and construction. Our knowledge of history and utility, our analysis of structure, serve often to blur and confuse the uncomplicated art of architecture. When we allow them to do so, buildings speak to us directly and immediately.

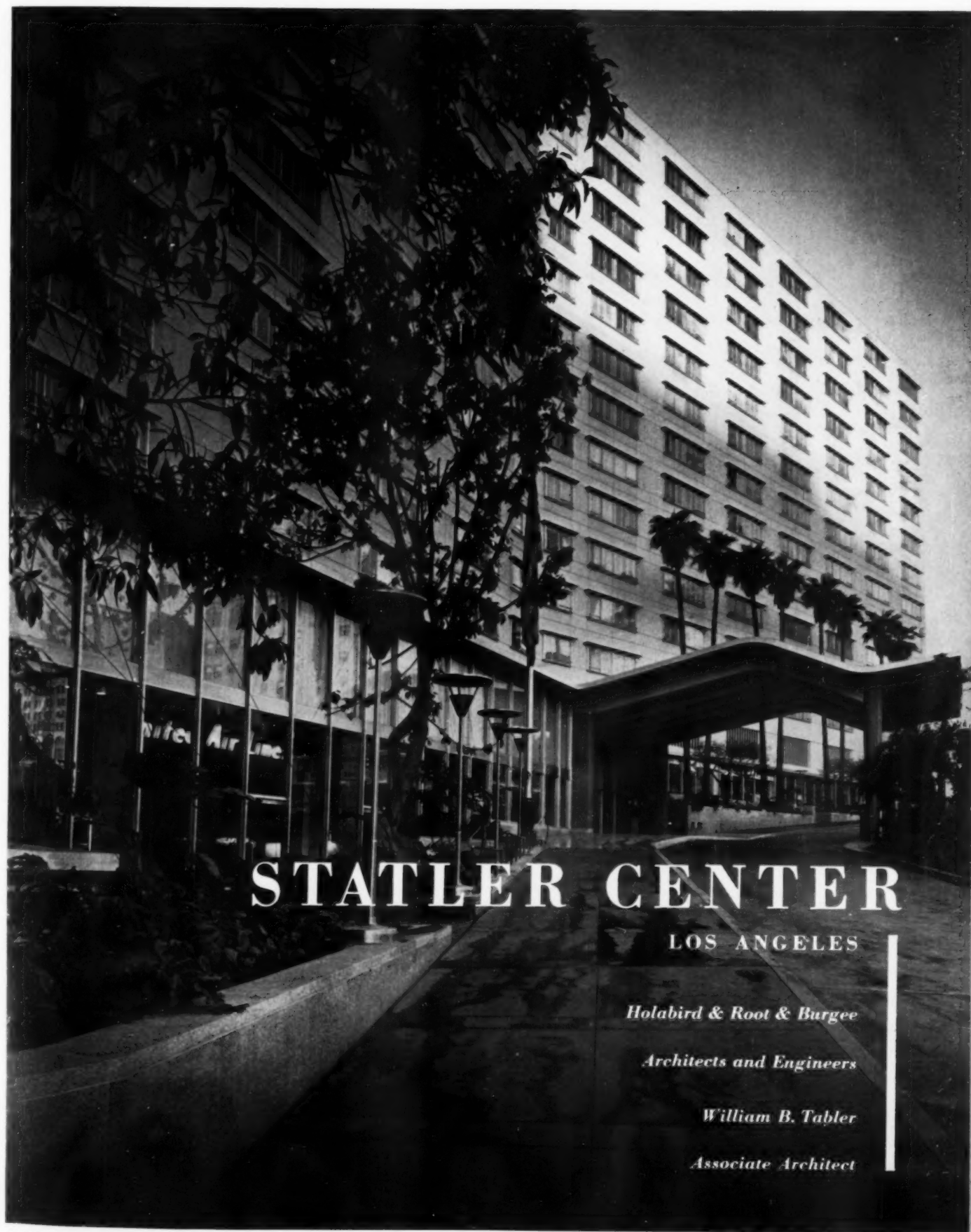
Not many among those who visit Washington, for example, know that the dome of the Capitol is made of cast iron. They have not even considered the material nor are they interested in the pressures of each part against other parts and against the ground. Whether or not the columns which encircle the dome carry the load which apparently is placed upon them or whether they are merely ornaments attached to the surface is a matter of little moment. That which they see is the hemisphere and the cylinder: the form of the great canopy, the encirclement of its surfaces, and its majestic pedestal. The architect who intended to express the grandeur and permanence of the state has attained his end. His effect was not embarrassed by considerations of use or by structural law because, for our average sightseer, these have no actual being.

The obelisk at the other end of the Mall may exist — and for most people does exist — as pure form. We know that it is not made of butter but that circumstance is scarcely present in our consciousness; and if we were to be told that the crushing load on the lower stones is twenty times that of stones near the top, or that the resistance to a north wind is only one-tenth the resistance to a wind from the northeast, this information would still inhabit our minds in an area remote from the noble abstraction before us. And among the millions who feel the serene pathos of the Lincoln Memorial, how many know what weight is placed upon the columns or on the foundations; that the light which gives life to the statue comes from electric spotlights hidden in the ceiling; or, turning scholar, that the plan does violence to the Greek tradition?

No one could guess from its external appearances the function or spatial pattern of *Notre Dame de Paris*. The choir in which the liturgies are intoned — *c'est pour lui qu'il est fait* — is articulated as an appendage of the transept. The aisles which surround the great nave are lost in mists of pinnacle and flying arch. It is the shapes and their arrangements, the planes, the lines and the shadows, not the structure and the revelations of internal ordinance, which sing the praises of God; it is the majestic processional of the abutments, indifferent in shape and position to the strains and tensions they

(Continued on page 206)





# STATLER CENTER

LOS ANGELES

*Holabird & Root & Burgee*

*Architects and Engineers*

*William B. Tabler*

*Associate Architect*

Julius Shulman



ON AUGUST 6, 1952, the first few floors of guest rooms in the Los Angeles Statler were opened. Some weeks before, tenants had begun moving into the Center's office building wing. On October 27 the entire Center was formally dedicated. Constructing and equipping this hotel project — the largest built in the United States in more than 20 years — took a little over two years; construction started July 5, 1950. Preceding even this date were an exhaustive analysis of the needs and potentialities of Los Angeles as a city in which Hôtels Statler Company would be prepared to invest some \$25,000,000; selection of the 3-acre site, twice as large as that of the 1943 Washington Statler; and determination of a program which took into account the Statler budget, rising construction costs, building and zoning regulations, site and traffic conditions, desirable allocations of cubic contents and square footage to the various purposes, and above all the number, type, size and arrangements of the guest rooms which remain relatively the most profitable part of any hotel.

Following the programming, design proceeded through

a number of preliminary stages. At one point it was found that, considering trends in operating and maintenance costs, a building designed solely as a hotel might not produce adequate profit at room rates in keeping with Statler policy. Since the Company had had experience with rental office space at its Boston hotel, the decision to include an office building on the large Los Angeles site was comparatively easy to make.

The program aimed at 1300 guest rooms; as built, the Center contains 1275, 70 per cent of them studio twin bed rooms refined from the Washington Statler precedent. These occupy 52 per cent of the cubic contents of the Center's hotel portion; function and public rooms, hotel offices, services, mechanical plant, etc., occupy the other 48 per cent. Net area per hotel floor devoted to guest rooms is 53 per cent of the gross, compared with 47 per cent in the Washington Statler. It was early decided that Los Angeles needed public and service areas comparable to those provided in Washington; the new Center has more square footage but only five per cent more cubic content. Likewise,



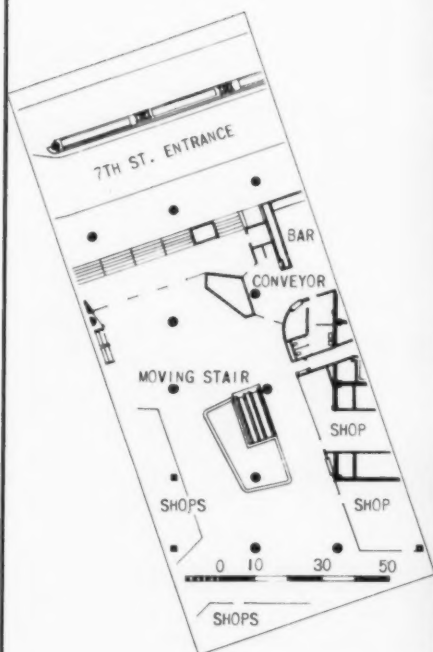
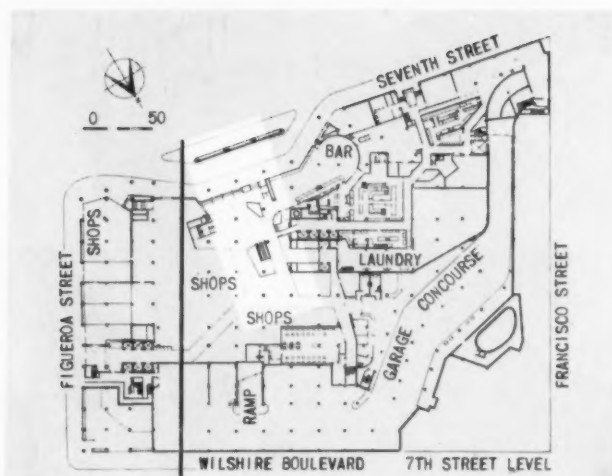
Julius Shulman

70,000 sq ft of shops were provided; the subterranean garage has space for 465 cars, with a supplementary check-in desk and elevators so travel-weary motorists can go directly from their automobiles to guest rooms without traversing public areas. The office building wing contains 150,000 sq ft of rentable area. Total content of the structure is 12,206,000 cu ft. For the entire Center, the contract cost was within estimates made three years earlier although construction prices had meanwhile increased 12 per cent.

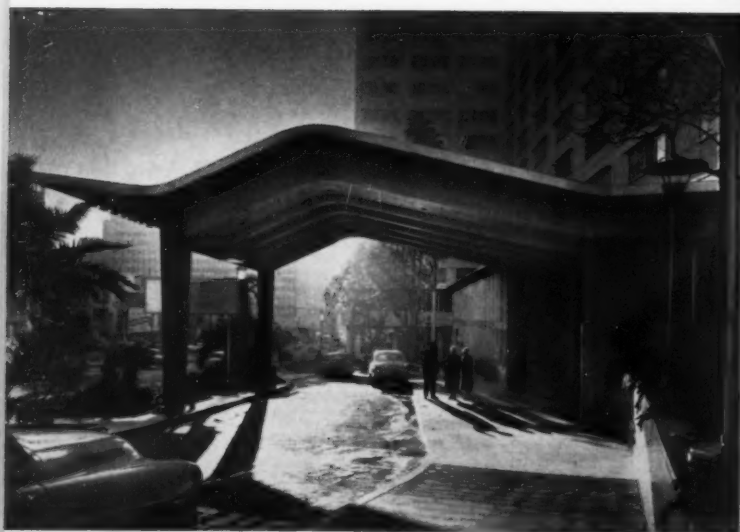
Photo at top left shows the office building portion on busy Figueroa Street, convenient to other commercial areas of the city, and placed on the Center's site to shield the hotel portion from the noise of traffic and commerce. At top right is the Wilshire Boulevard side which provides a suitable "address" but, due to traffic conditions, is less convenient for most arriving guests than the opposite (Seventh St.) side. At right, high point of the sharply sloping sight, corner of Wilshire and a new street, Francisco, provided by the city on land partly donated by Statler.





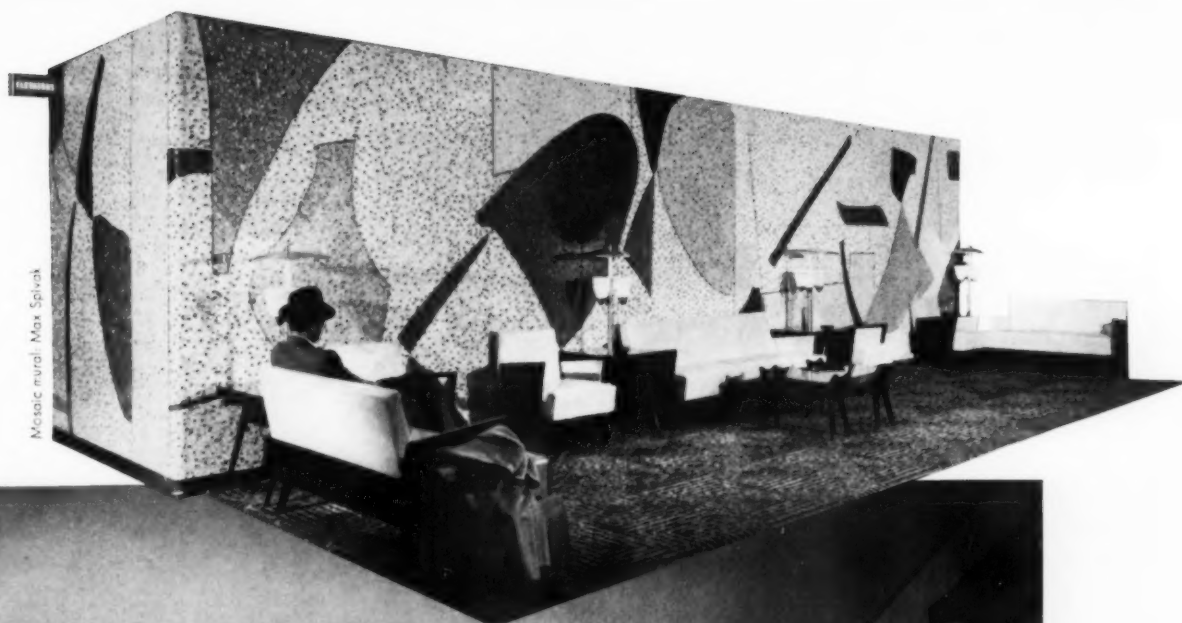


## STATLER CENTER: PUBLIC AREAS

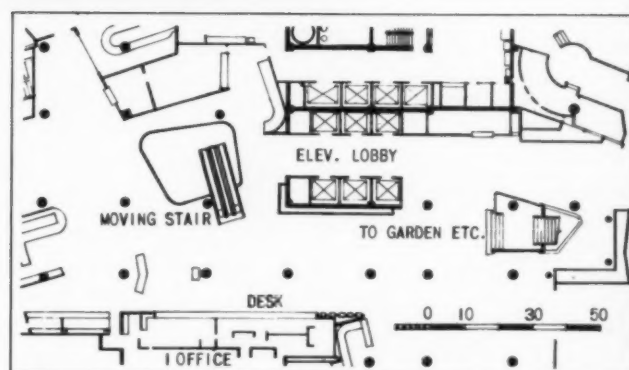


The sloping site permitted placing much of the extensive shop area at the various street levels and facilitated arrangement of public space on the three main floors (see ARCHITECTURAL RECORD, March 1951). Interior design is here no superficial matter of finishes and furniture. It is all-important and three-dimensional. For entering guests, circulation is direct. Tenants from the office building find convenient passages to dining rooms apart from the guest lobby. Conventioneers, drawn by the gay garden, cocktail lounge, supper club and promenades, find themselves mounting a prominent stair to ballrooms above. Behind the successfully brilliant mosaic mural (top photo) is the elevator lobby, located so that it cannot become a passageway.

Mosaic mural: Max Spivak

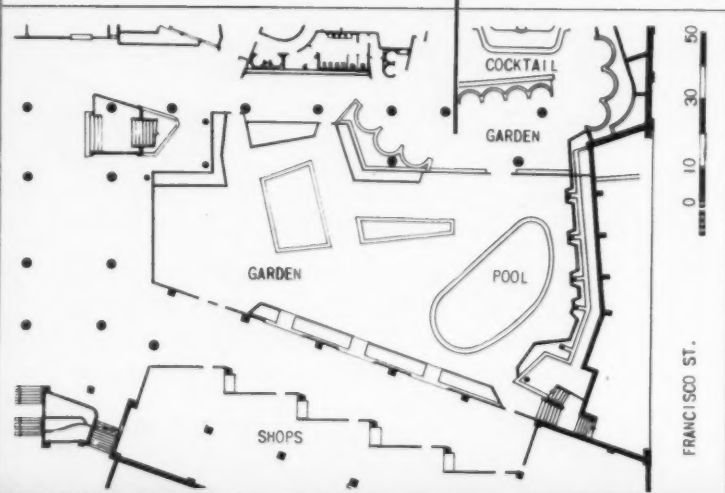
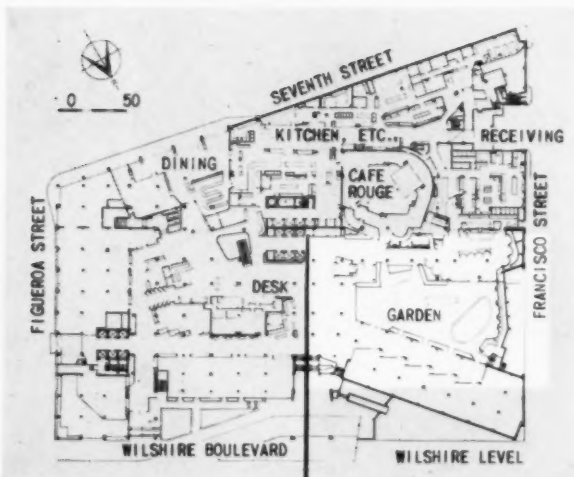


Julius Shulman



Most guests reach Wilshire level (left) by moving stair (above); on arrival they face desk with business section to one side, garden and public rooms on other

STATLER CENTER: PUBLIC AREAS







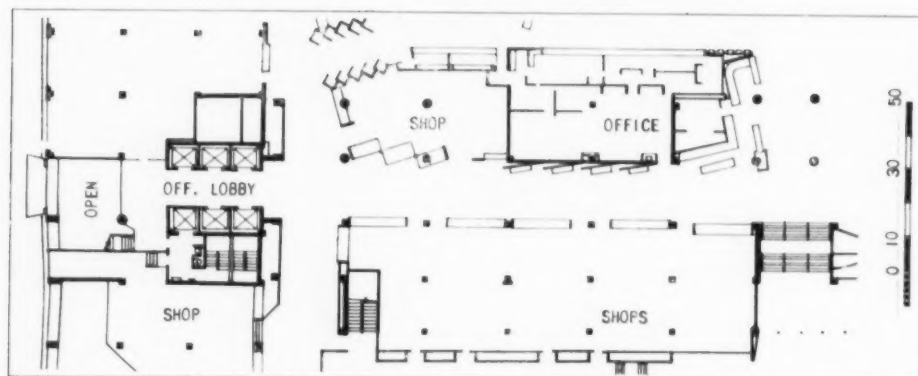
Clustered around the garden in the court which separates the north and south hotel wings are several public areas. To the east the garden is protected by the planted retaining wall that supports Francisco Street and by the street itself, from the possible encroachment of future buildings. Photos: far left, view from stair to ballrooms;



Julius Shulman

left, across garden pool toward two-story promenade and shops; above, on the promenade; right, garden stair. Below, left, Veranda Cafe and cocktail lounge; and right, from roof terrace above Veranda Cafe. Brightly lighted at night, the garden might some day be a setting for a spectacular show or aquacade.

# STATLER CENTER



## ARCHITECTURAL INTERIORS

Design | Details | Materials | Equipment



At top of page are, left, Cafe Rouge (popular priced dining room), divided into intimate sections by wood screens, plant boxes, color treatment and changes in level; center, Golden State Room, and right, Pacific Ballroom, two of the four ballrooms and eleven private dining rooms, all on one floor, and all served from one

kitchen. Function facilities of the Statler Center are booked solid for many months. Pacific Ballroom in conjunction with adjoining Sierra Room can accommodate 1200 at a banquet when soundproof partition between them is raised. A small bar on this floor has proved extremely profitable.

Many shops in the Statler Center were designed by independent architects for individual tenants. Left below, cases project into the hotel lobby to provide profitable merchandising space. Right, sliding panels open another shop to corridor leading to the office building; airline ticket offices in background



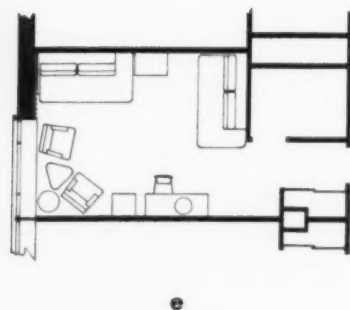
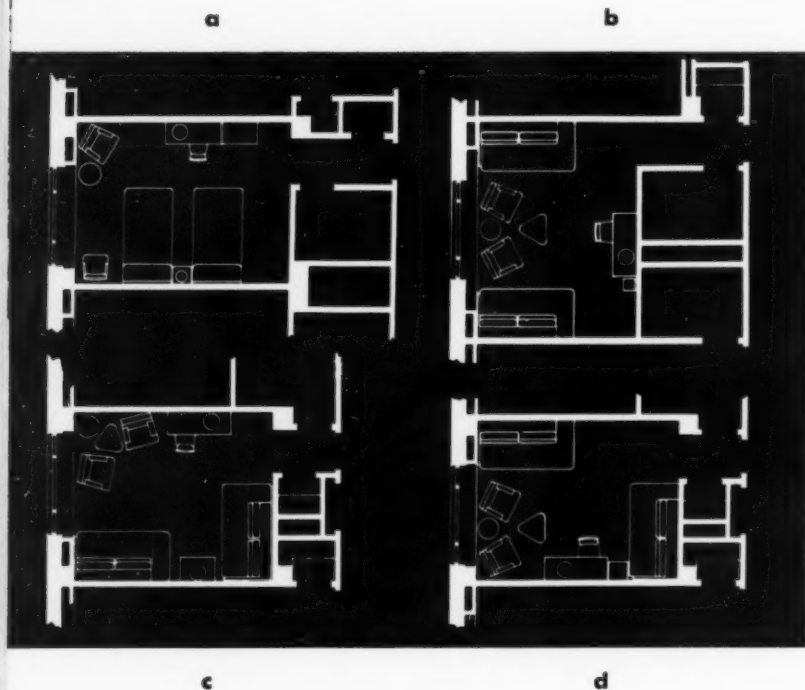
## PUBLIC ROOMS, SHOPS, OFFICES



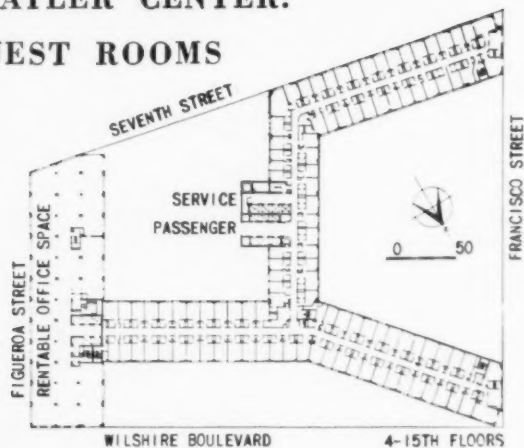
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Above, tenth-floor office building elevator lobby forms reception area for the Foote, Cone and Belding advertising agency. Left, looking down corridor from office building toward hotel lobby; airline offices at right of picture





## STATLER CENTER: GUEST ROOMS



Evolution of the studio type of guest room used for 70 per cent of the rooms in the Los Angeles Statler. While this had been used in the Company's Cleveland and Detroit hotels in the late 1930's, its first extensive use was in the Washington Statler in 1943. The conventional guest room (a) 11 to 12 ft wide, had furniture so placed that rooms were full of beds, floor space broken into ineffective small areas. Spreading beds apart unified these areas. The room was turned 90 degrees (b), it became logical to make beds convertible to couches for daytime living, meetings, etc., and the public response was so great that very few of the so-called conventional rooms were used in Los Angeles. Variations c and d were used in Washington. Los Angeles rooms are slightly larger, have specially designed sofa-beds, more economical bath and closet arrangement in several variants of plan e. Since a solid wall is needed to prevent down-draft on one bed, interior design influenced fenestration and exterior appearance. Note also special bathroom vanity-lavatory and seat placement, photo left, below

Julius Shulman

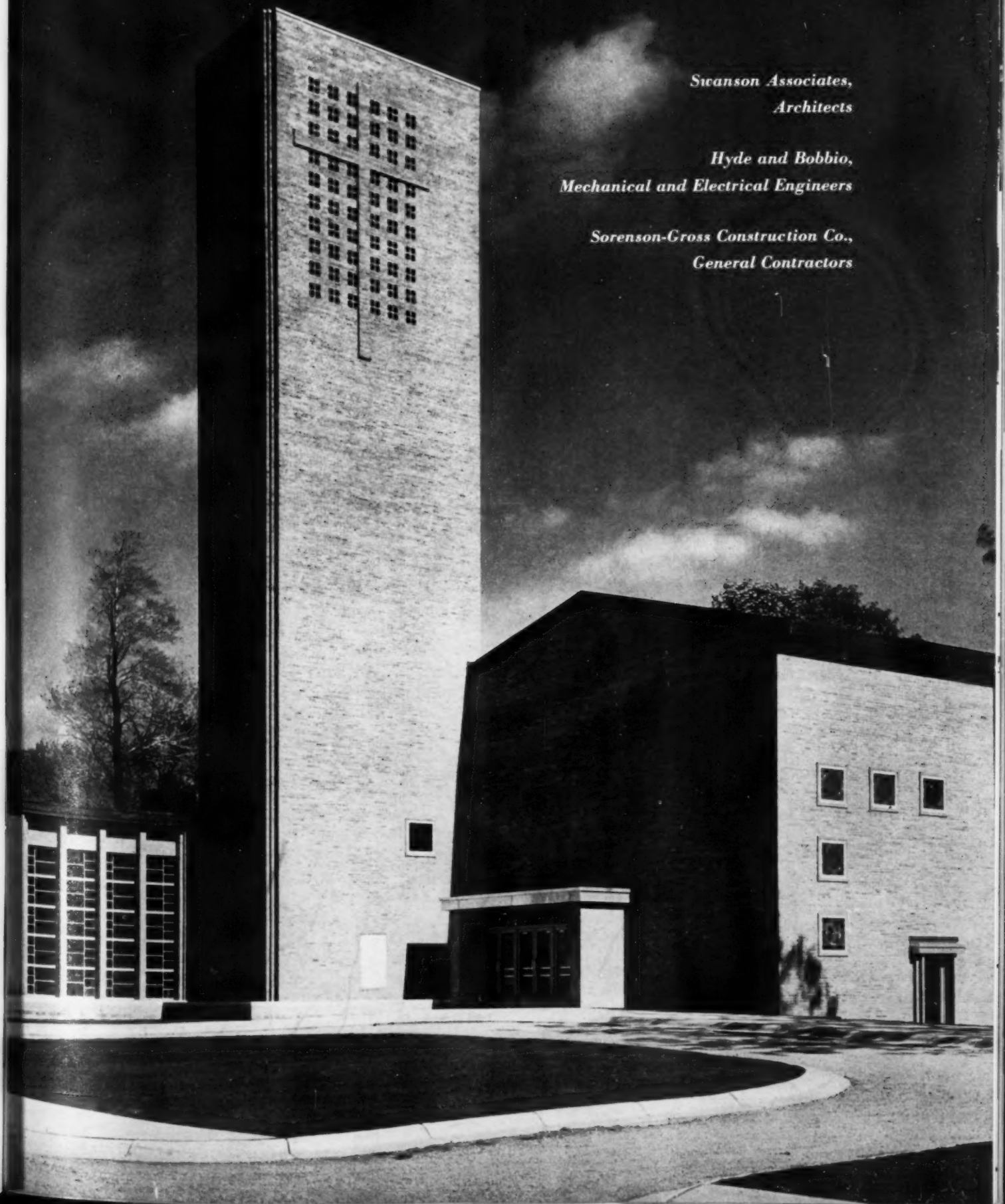


# FIRST BAPTIST CHURCH, FLINT, MICHIGAN

*Sicanson Associates,  
Architects*

*Hyde and Bobbio,  
Mechanical and Electrical Engineers*

*Sorenson-Gross Construction Co.,  
General Contractors*

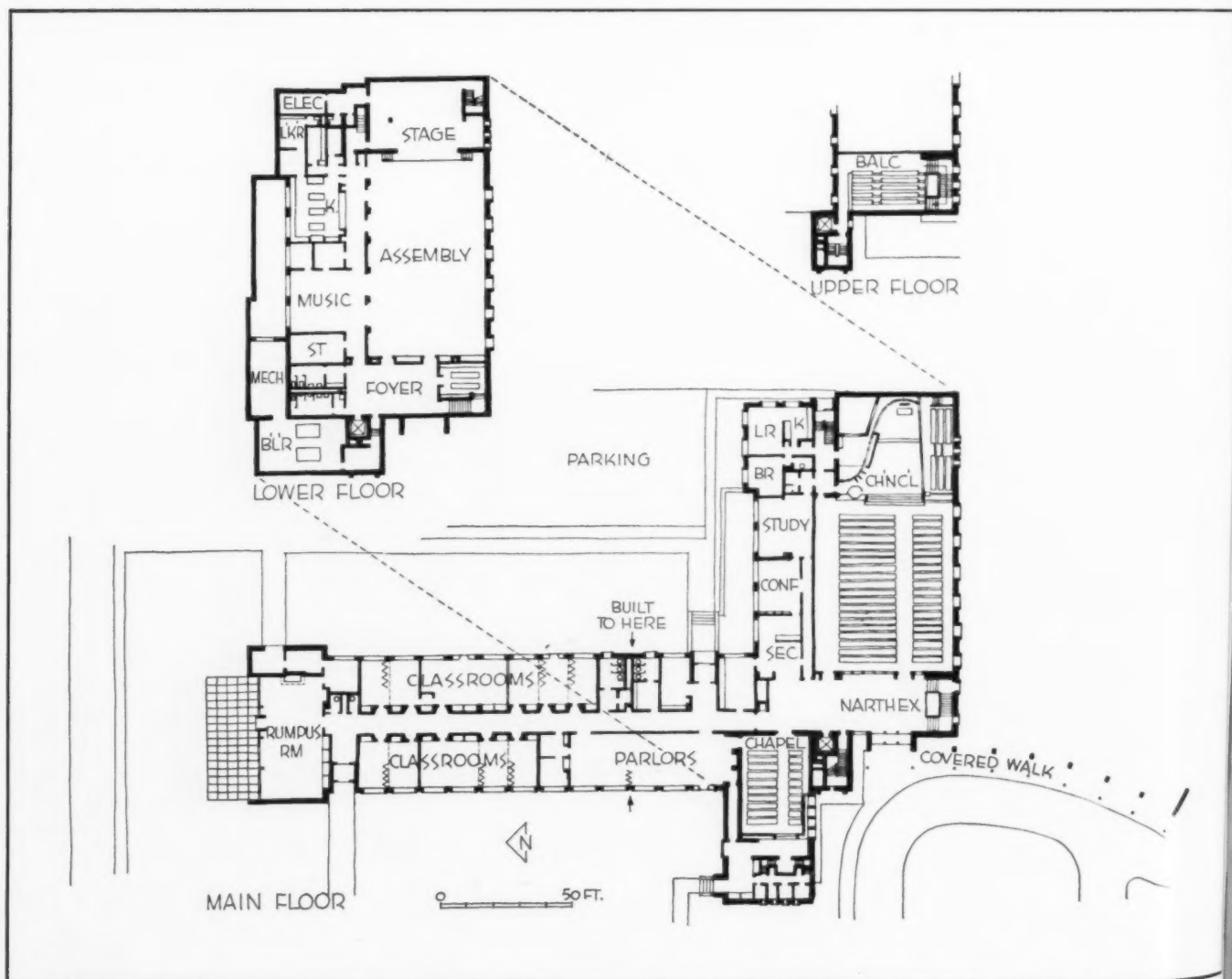


THE BROADENING SCOPE of many church programs to serve the needs of various community groups as well as the more traditional church functions demands a fine balance of a sincere devotional atmosphere and a vital efficiency in plan and design. The sensitive handling of this building, the First Baptist Church in Flint, Mich., has brought it many laurels, including a satisfied congregation and a first prize awarded by the 1951 annual joint meeting of the Church Architects Guild and the North American Conference on Church Architecture.

The building is located on a 7½-acre site adjoining the new campus of Flint Junior College. Large sections of the tract are devoted to parking areas, woodlands and playgrounds. An asymmetrical plan was evolved to give a smooth working relationship of areas in the structure: the narthex is directly accessible from both the front drive and the parking area, and in turn opens

on all principal rooms; the 125-seat chapel has a separate entrance from the drive; placement of the choir permits a variety of processions; the basement assembly room is convertible to a number of uses, seats 475, has dining accommodations for 375. The main church seats 440 in fixed pews in the nave, augmented on special occasions by 120 chairs in aisle spaces and 200 seats in the balcony and narthex. The present building will eventually be expanded by a wing to the north (shown in plan below) to provide additional church school rooms and a youth recreational center.

The structure has concrete foundations, steel frame, brick exterior, aluminum sash and a built-up roof. Interior partitions are plastered cinder block, or glass and wood. Floors are asphalt tile; ceilings are acoustical plaster or tile. Air conditioning units are provided — compressors and cooling coils will be added. Empty conduit is provided for future intercom and P.A. system.





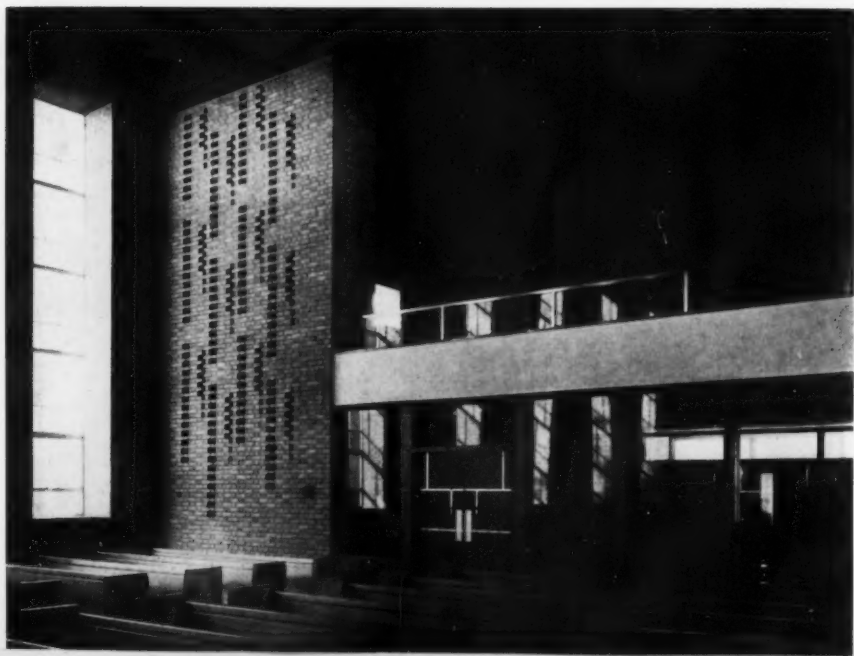
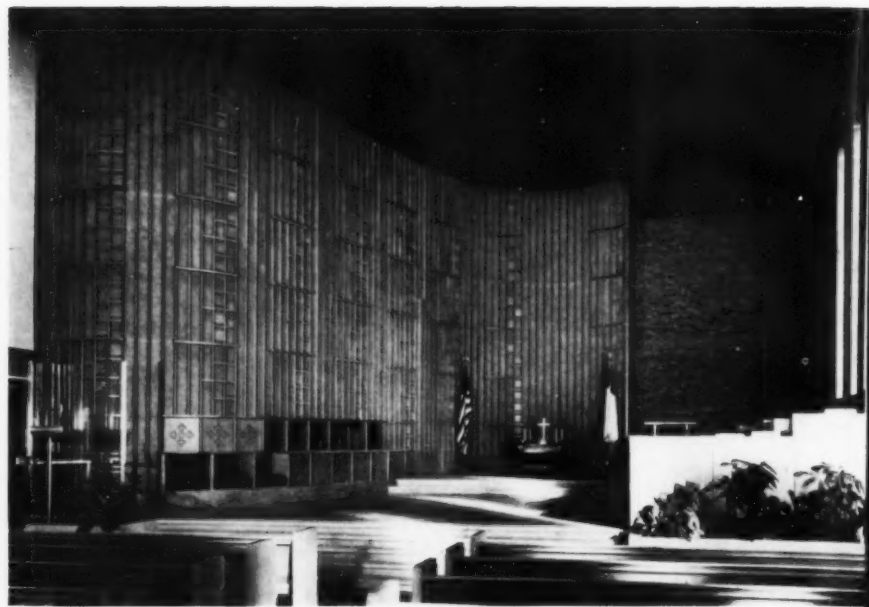


The exterior of the church is dominated by a tall carillon tower. A large parking area at the rear has a direct entrance to the narthex (below)



Richard Shirk

FIRST BAPTIST CHURCH, FLINT, MICH.



A dramatic organ screen of white oak and fireproofed burlap contrasts with the quiet, elegant simplicity of the nave. The south wall is exposed brick with a pierced wing to shield balcony stair (bottom left). Floors are asphalt tile. Lighting (below) is controlled from organ pit. The pulpit (left) is a round stone in the floor, with an aluminum lectern and backed by a clear plastic screen. A redwood slab will replace communion table. Chapel (center left) has baptistry behind curtains at rear

Richard Shirk





## FLORIDA HOUSE MAKES MOST



A WARM AND SUNNY CLIMATE is obvious in every line of this wide-open Florida house. A minimum of space is enclosed — and even that minimum literally flows into the outdoor living areas.

As the plot plan opposite shows, the house consists of two wings, connected only on the exterior. The wings are angled at 90 deg to shelter a large central garden and to provide a smaller private garden at the rear. Both gardens as well as a spacious play area behind the

bedroom wing are completely secluded: a high louvered fence shields the eastern end of the central garden; hedges and closely planted trees rim the southern and western edges of the site.

The house has no halls and no "front door." The main entrance is through an electrically operated gate at the southeastern end of the central garden; a brick-paved walk connects the gate with the living room terrace. There is no garage, nor even a carport: the car

## OF SUN AND OCEAN BREEZE



Ezra Stoller

shelter (dotted lines on plan) at the end of the driveway is a yellow canvas awning laced to a frame of galvanized iron pipes.

Every room in the house except the laundry has direct access to the central garden — the two bedrooms via a gallery five steps up from the living room terrace. The difference in level increases the privacy of the bedroom wing and also adds visual interest to the enclosed garden area.



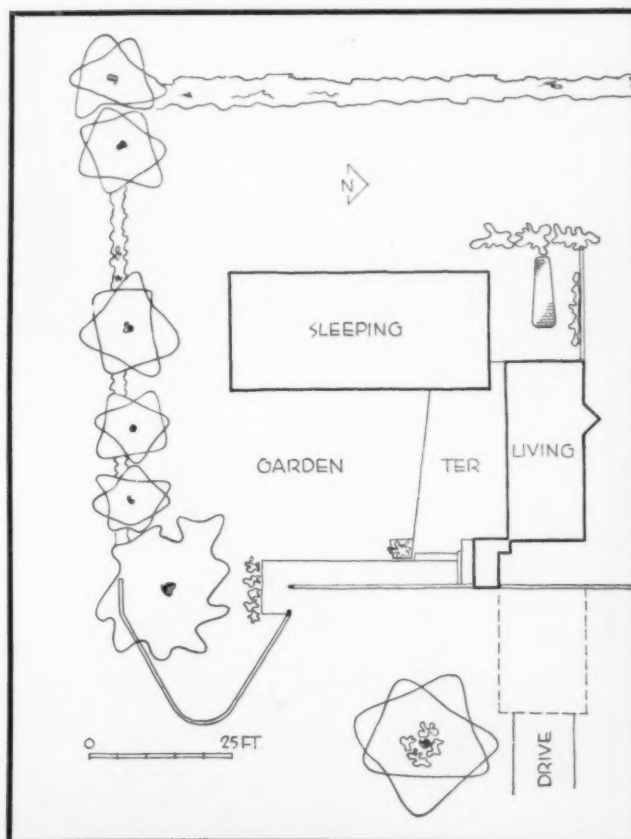
*Residence for*

*Mr. and Mrs. Edward Riley*

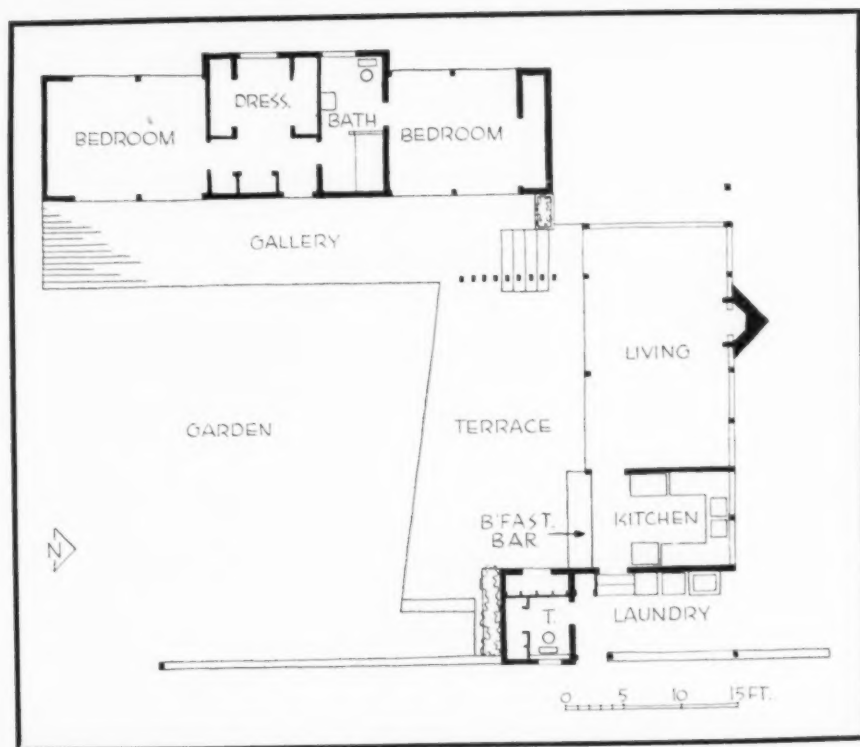
*Miami, Florida*

*Alfred Parker, Architect*

Living room terrace (left and above) is red brick; gallery of bedroom wing has red cypress floor. Exterior walls are vertical cypress siding. Breakfast bar is at one end of kitchen (plan next page)



FLORIDA HOUSE







Opposite page: despite proximity of neighboring houses, garden is remarkably private thanks to high fence and strategic planting; louvered fence has base of red brick pavers. Left: living room chimney is de-emphasized by strip windows above and glass wall at one side. Below, left: kitchen, like other rooms in house, is minimum in size. Below: view from laundry steps through length of living room wing to private garden at rear

Ezra Stoller





*Above: space between wings at rear of house was planned for private garden with a small pool, not yet installed. Amount of wood used on interior of house — particularly in bedroom wing — is pleasant surprise considering Miami location. Bedrooms are connected by dressing room as well as gallery*

Ezra Stoller







## WHERE ECONOMY GUIDED DESIGN

*Weaver Residence, Thornwood, N. Y.*

*Warren Wilson Weaver, Architect*

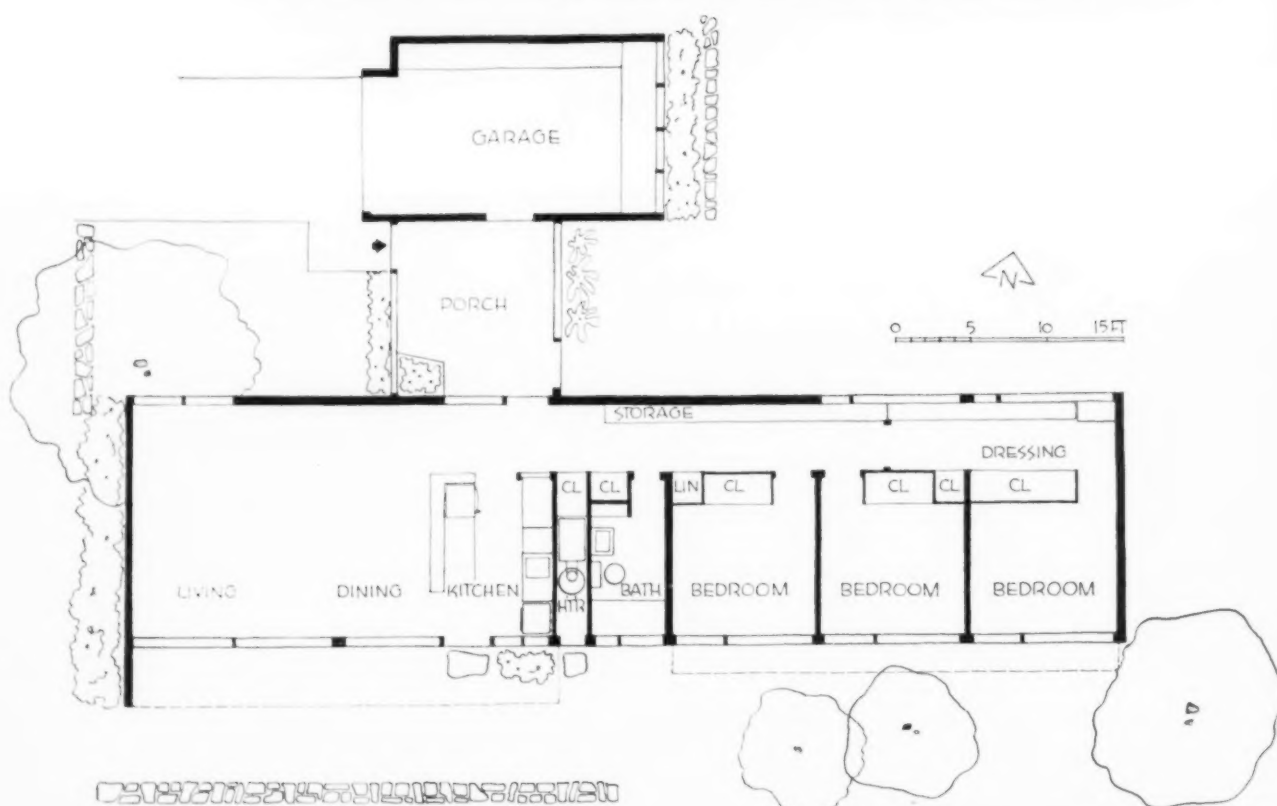
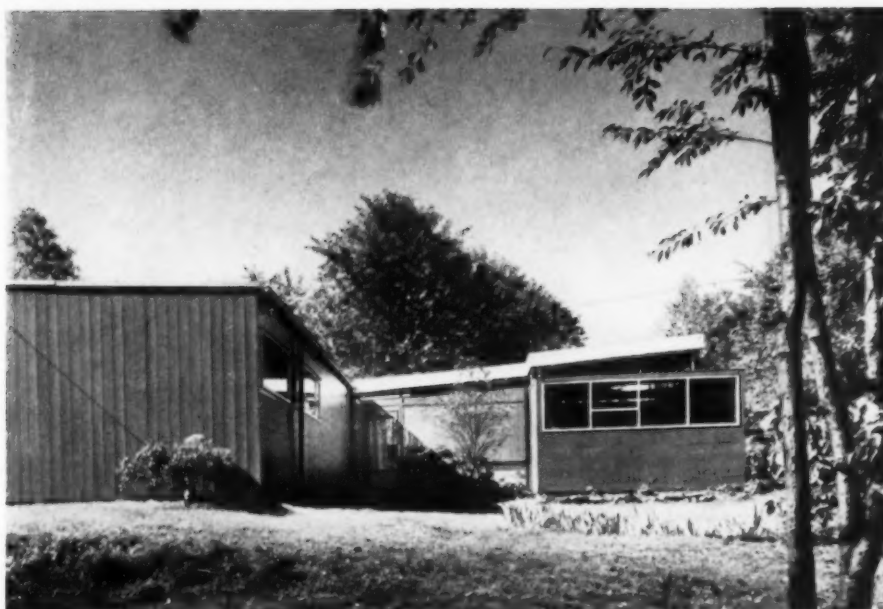
THE SITE OF THIS HOUSE, in a sparsely populated area of Westchester County, invited a plan that would incorporate the surrounding countryside with the interior: economy dictated a simple design. Result: a small, flat-roofed rectangle that seems much more spacious than it actually is, due to the large glass areas that seem to bring the outside in. A central utility core, flanked on either side by kitchen and bath, is the main economy factor. An oil burner, also part of a packaged utility core, furnishes hot air heat. Additional warmth results from natural solar heat penetrating the abundant glass areas. The foundation is concrete and concrete block. Floors are linoleum and carpet over  $\frac{1}{4}$ -in. plywood.

Lighting is from the ceiling in the living area; wall mounted light troughs illuminate the bedroom wing. Many built-in units, designed and built by the architect-owner, provide adequate storage facilities for the occupants and permit flexible furniture arrangements. Interior walls are cedar siding with redwood stain, fir plywood and mahogany plywood. Cedar siding on the exterior has been painted brick red — a harmonious contrast to the green environment. The house is connected to the garage by a screened porch, which, convenient to the kitchen, serves as a pleasant dining area in the summer. The well lighted garage contains a workshop area at window end and built-in shelves line the outer wall.



*The house is so oriented as to permit the winter sun to penetrate the large glass areas. Eyebrow overhang provides wind and glare protection*

Unbroken wall is master bedroom and dressing room. Clerestories and strip window in garage afford unusual light for workshop area



Entrance to house is through connecting porch. Extension of garage at extreme left was designed for built-in storage shelves



Joseph W. Molitor



Redwood-stained cedar siding on end wall of living room is enriched only by a painting of Weaver child. Window wall admits excellent light



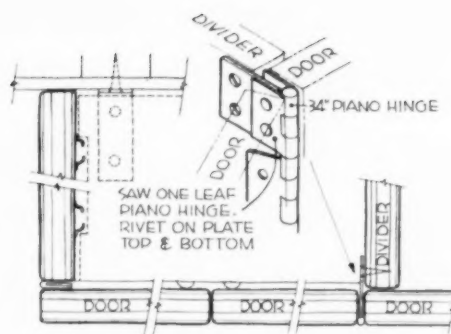
Dining end of living room with kitchen in background has storage room-divider designed by the architect. Door is main entry from porch. Turquoise carpeting complements tangerine wall





**Bedroom wing corridor** has plywood cabinets along outer wall. An attractive and useful key-note is added by primary colors on unit openings

**Brush drawings** by Soriano provide the principal decor in daughter's bedroom. Walls are blue and yellow. Storage unit extends under window

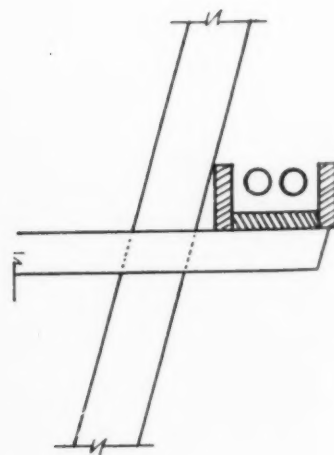
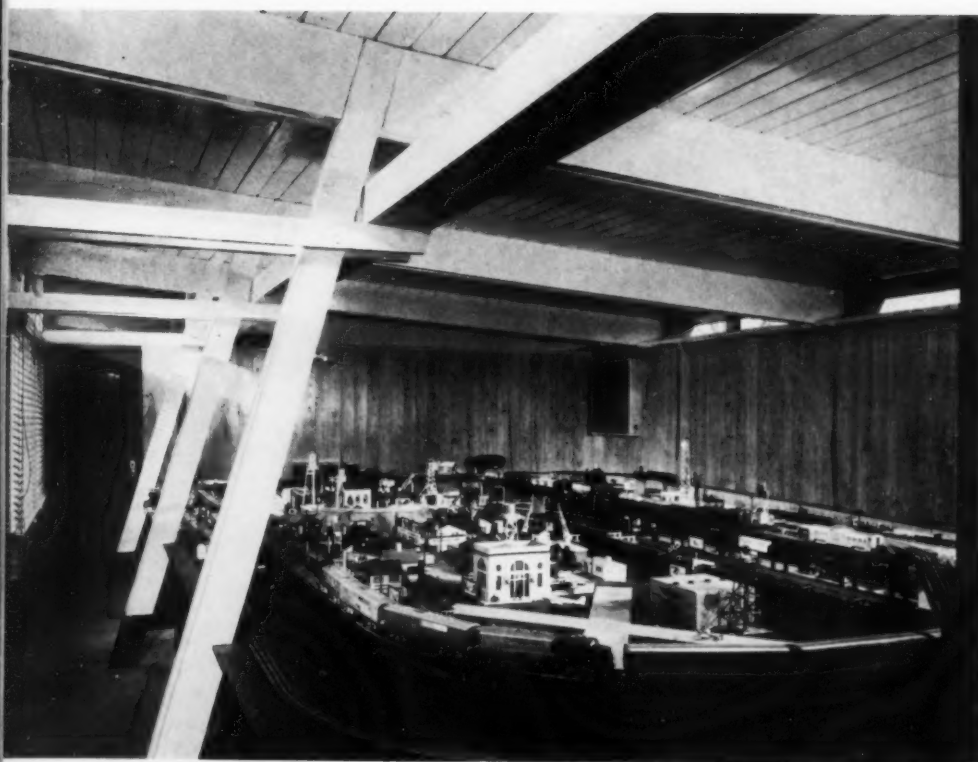


**Detail** illustrates piano hinge used on architect-designed closet. Finished unit, below, separates master bedroom from dressing room



Joseph W. Molitor

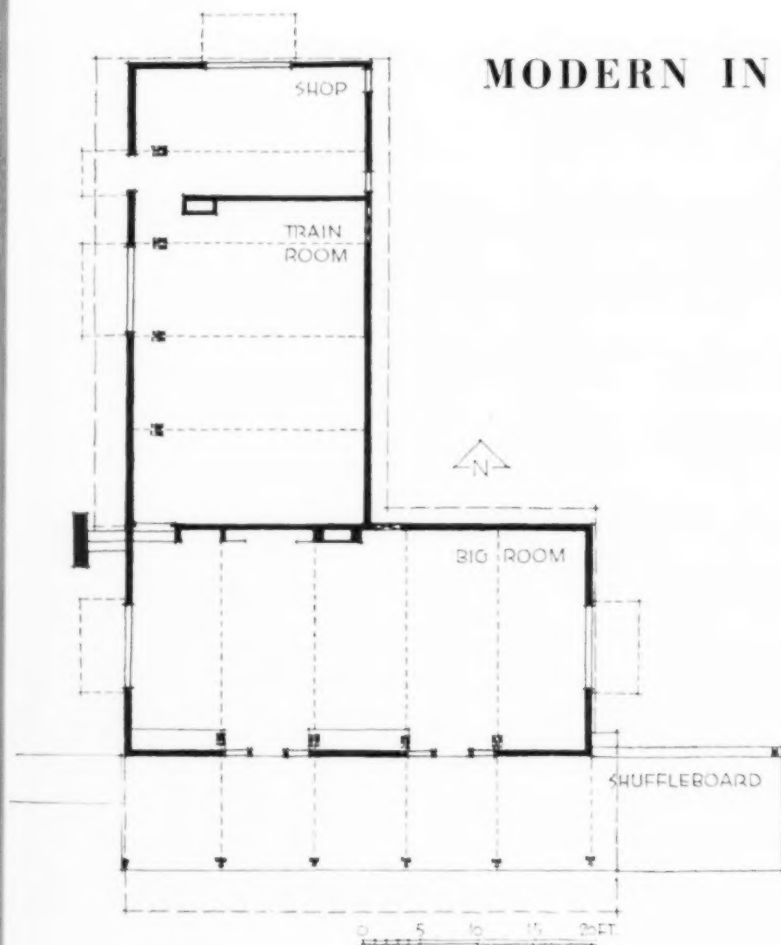




## MODERN IN PRE-CIVIL WAR SETTING

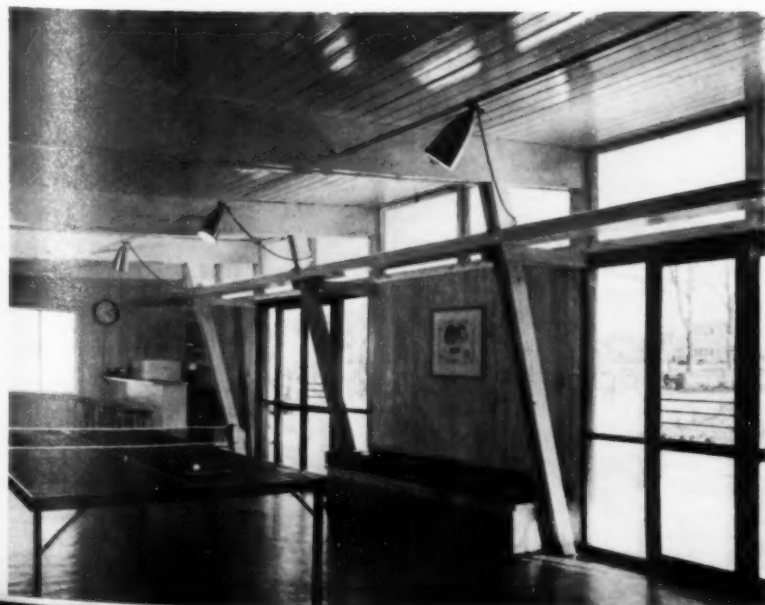
*Biggs, Weir and Chandler, Architects*

*Detached Playhouse in Jackson, Miss.*



BUILT AS AN ADJUNCT to a southern ante-bellum house, this contemporary playhouse has the distinction of being located in a unique setting. The successful harmony of the old and the new has been achieved mainly through color — the exterior of the latter being brown vertical siding with white trim. Resting on a concrete slab, which extends outside on the front to accommodate a shuffleboard court, the playhouse is connected to the garage and the main house by walks. A large overhang on the front and corrugated cement asbestos awnings on the west side of the building give protection from sun and glare. The roof is built-up on 2 by 6 tongue and groove decking over truss construction. The interior of the playhouse (shown below and on the opposite page) has high ceilings with suspended light troughs running parallel to the outer south and west walls. The big room is well lighted on three sides and contains a small bar in one corner and a ping pong table in the center of the room, spot-lighted from above. The train room is almost entirely occupied by model electric trains, which are permanently set up on a large built-in table — this room being the main attraction of the playhouse and one of the basic reasons for its conception.

Joseph W. Molitor

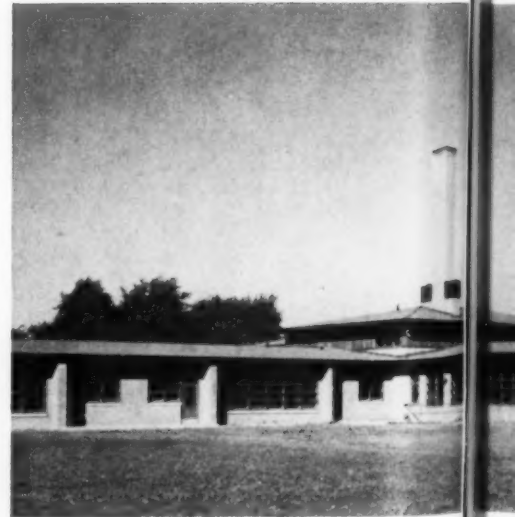
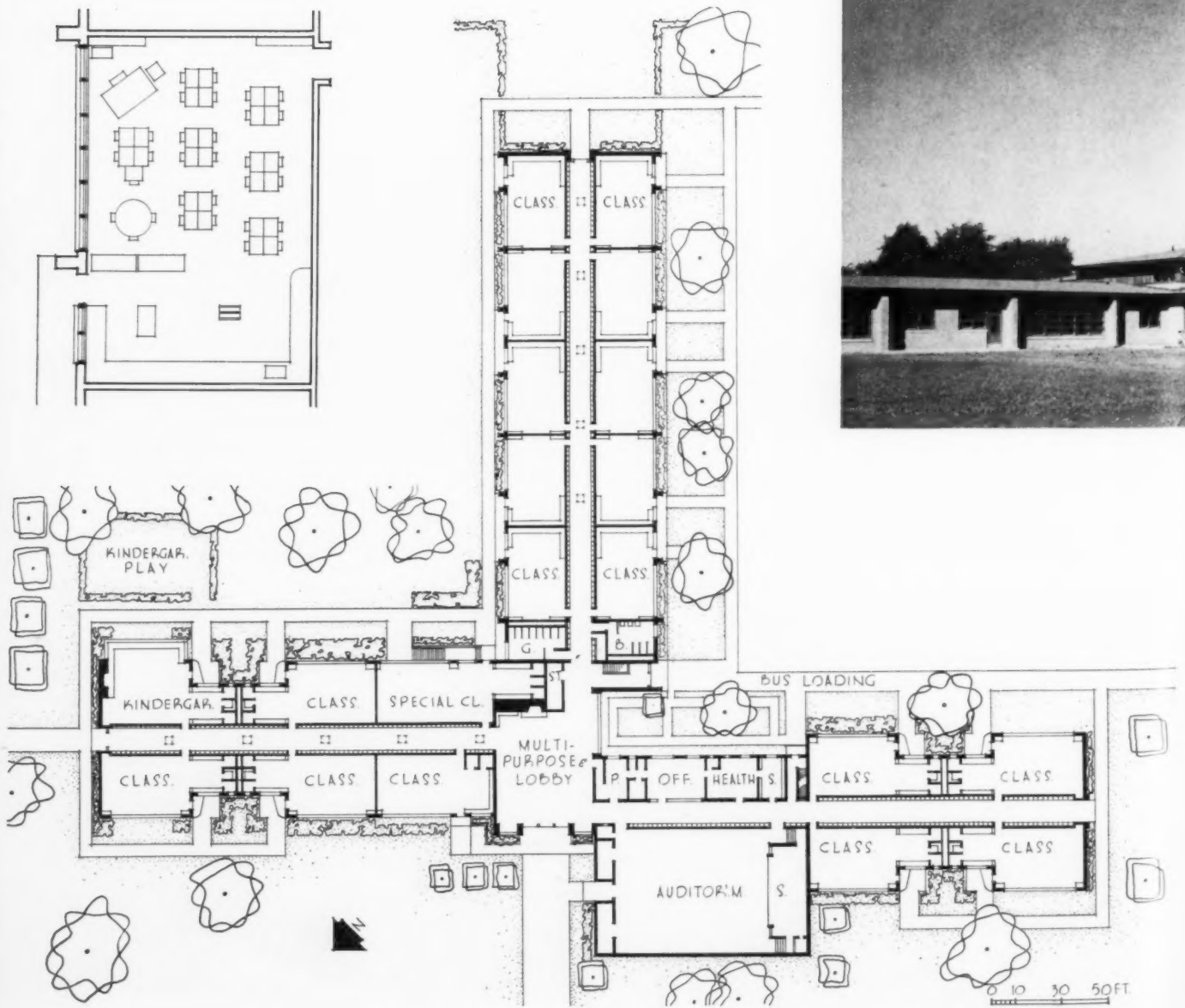


Big room at left is used for table tennis and other games. Storage benches on two wall sections provide hidden space for recreation equipment. Doors lead to shuffleboard court, just outside. Train room and detail of light trough is indicated on opposite page





NEW ELEMENTARY SCHOOL



## ARY SCHOOL FOR SUBURB OF TOLEDO

### *Perrysburg Elementary School*

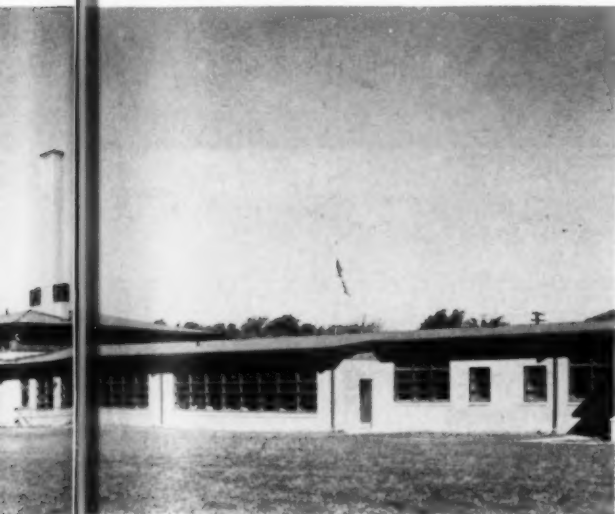
*Perrysburg, Ohio*

*Britsch & Munger, Architects*

**T**HIS ELEMENTARY SCHOOL in a suburb of Toledo was designed in 1944, some six years before construction was begun. Although increased enrollment and other considerations necessitated a revision of the original plans, the feature which first called attention to the design — the double-loaded corridor with depressed roof and clerestories (ARCHITECTURAL RECORD, March 1948, p. 124) — was retained. The major change made was in the intermediate classroom wing, originally planned with only eight rooms, each, like the primary rooms, with a work alcove and toilet facilities; the alcoves were eliminated to make room for two additional

classrooms, but the advantages of the alcoves were not sacrificed: work counters and cabinets at one end of each room serve equally well. Lavatories for the entire intermediate wing were placed at the lobby end of the corridor, convenient not only to the classrooms but also to the auditorium and lounge-lobby, both of which are used by the community after school hours.

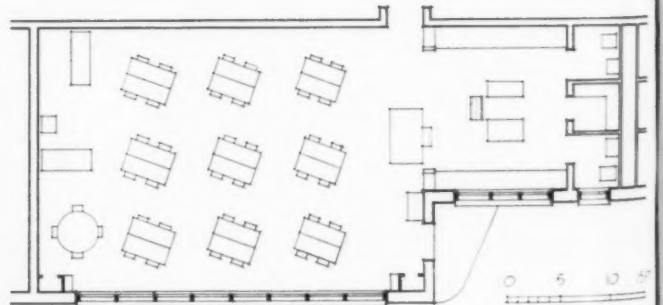
The building is one story in height, with an exterior of a soft salmon-colored brick; the front entrance is Indiana limestone. Every classroom has direct access to its own outdoor play area and is protected from the sun by a 3-ft roof overhang.



Harold C. Munger



School occupies 14-acre site adjoining 21-acre village-owned plot which is being developed as a community recreational area. School's bus loading platforms are at one end of large parking area (air view, opposite page). Kindergarten (right) is at one end of primary wing, has own secluded outdoor play area. Intermediate classrooms (right, above, and plan opposite) are 24 by 37 ft, have work counters on end walls



Classroom corridors in all three wings are double loaded, lined with lockers; roof is depressed to permit glass block clerestories giving bilateral lighting to all classrooms. Despite unusually heavy snow last year, roof troughs and skylights caused no trouble.





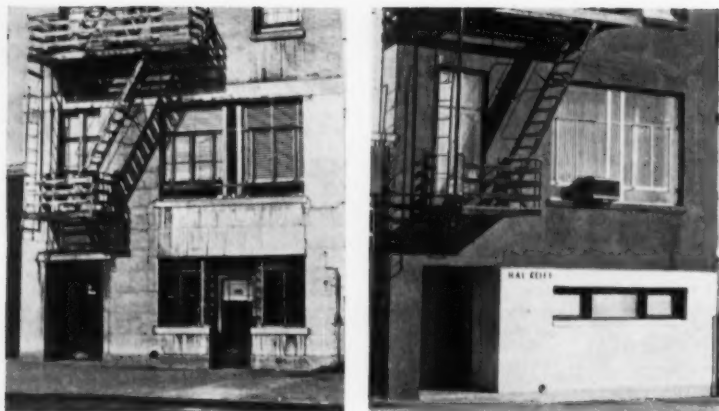
All primary classrooms (photos and plan, opposite page; large photo below) have work alcoves and toilet facilities. Classroom walls throughout building are cinder block, painted in pastel shades, trim is poplar, floors are asphalt tile, lighting is fluorescent

Lobby (below) doubles as lounge and multi-purpose room; from it stairs lead down to basement cafeteria, visual education room, lockers and showers, and up to teachers' restrooms and conference room on mezzanine. This part of building is planned for community use



Harold C. Munger





*Hal Reiff Studio, New York*

*George S. Lewis and  
Robert H. Rosenberg, Architects  
and Allan Gould*

*Samuel Edelman and  
Phineas Zolot, contractors*

## STUDIO WORKSHOP FOR A FASHION PHOTOGRAPHER

**T**HIS ALTERATION and addition had to meet many requirements, of which two in the studio were fundamental. The resulting sequence of spaces is both functional and pleasing: from the street one enters a reception room of medium size, continues through a narrowish passage which doubles as exhibition space to come finally into the bright largeness of the studio. Logically enough, the lack of daylight at the plan's center of gravity becomes a positive virtue when the developing and printing rooms are located there, as they are.

For the air-cooled studio, the aforementioned two fundamentals were a 12-ft clear height and natural light

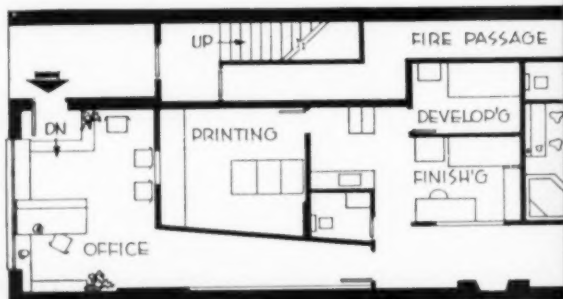
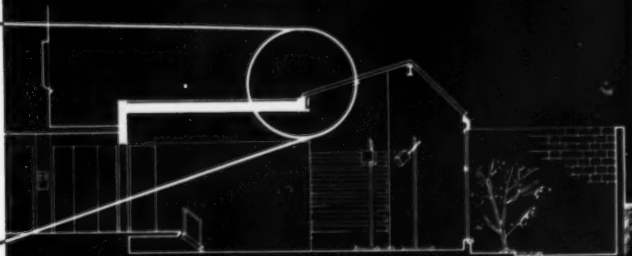
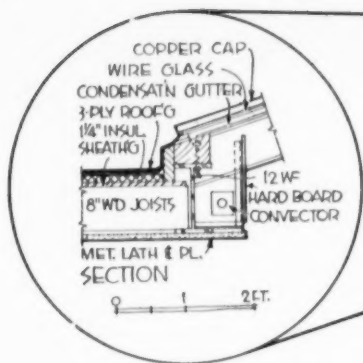
of a quality proper for picture taking. A building code height restriction led to the dropped floor in order to achieve the necessary ceiling. Top light through the diffusing skylight combined with reflected light from the white garden wall and white interior walls yields an intensity nearly equal to the outdoors, yet possesses the soft, luminous, non-directional quality desired.

Versatility of use was gained by several devices: the garden with corners and walls with and without planting; the raised platform for camera angles up or down; fireplace, bathtub and dressing table all within easy camera range; hooks in walls and ceilings for props.

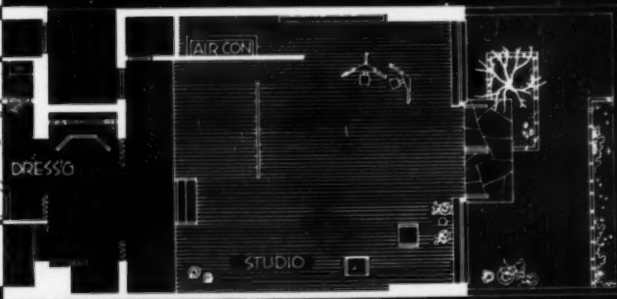


Large desk in reception room, above, has a raised portion which serves for filing, storing photographs, and as a counter facing the entrance. This desk and wall cabinet, as well as the coffee table and the popular string and metal chair, right, were designed by Allan Gould. Note the stairs, right, which can be rolled to any position along the platform or removed altogether. Photo at far right shows Reiff at work: he sometimes uses the large rolls of colored paper for backgrounds



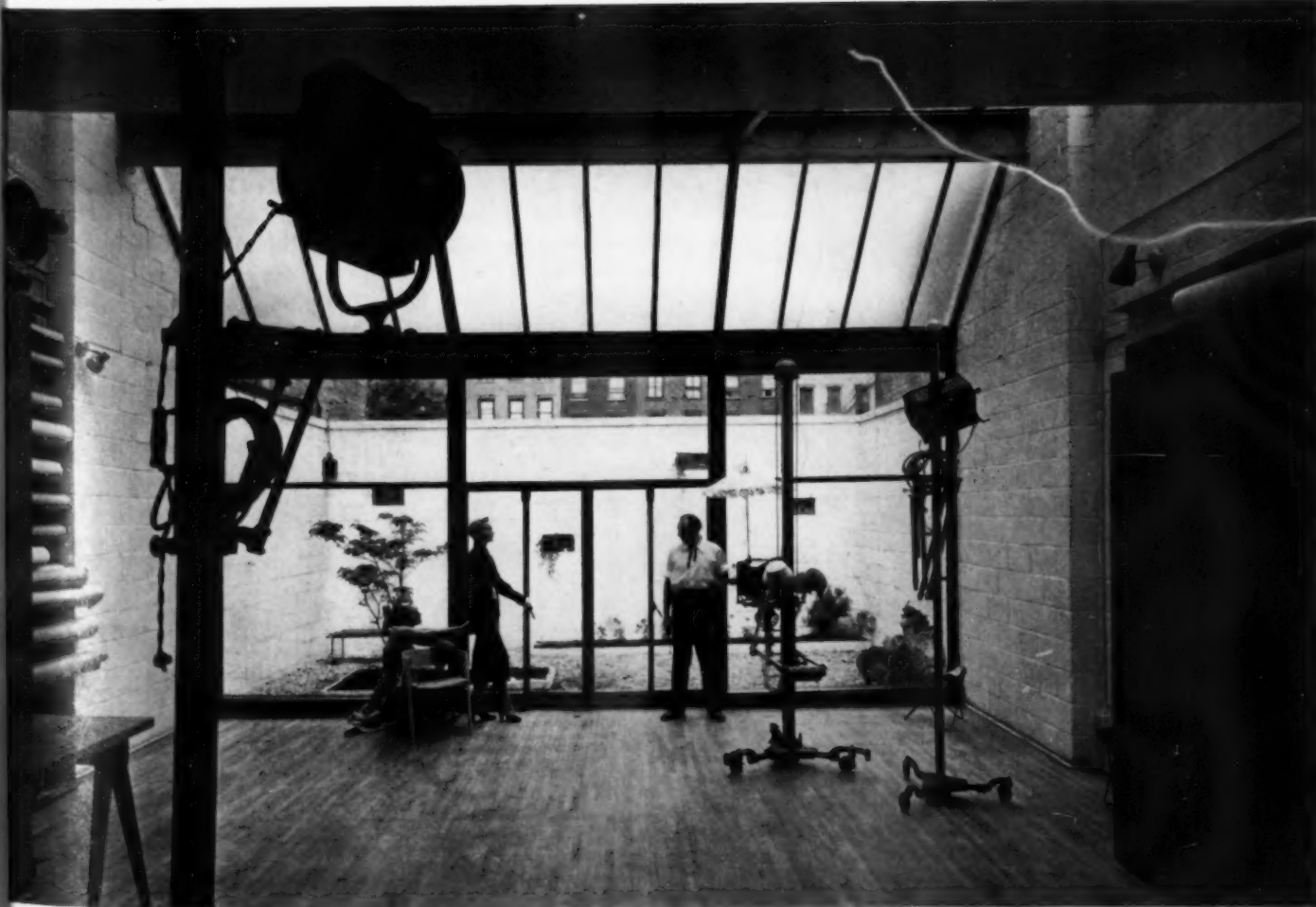


PLAN



Above white-line plan and section show new studio addition and garden. Remainder is remodeled. Skylight over studio has convector detail top left, to prevent drafts.

Alexandre Georges







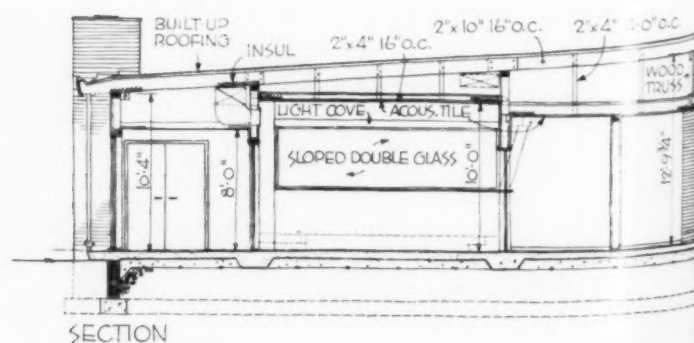
## A SMALL RADIO STATION ON LONG ISLAND

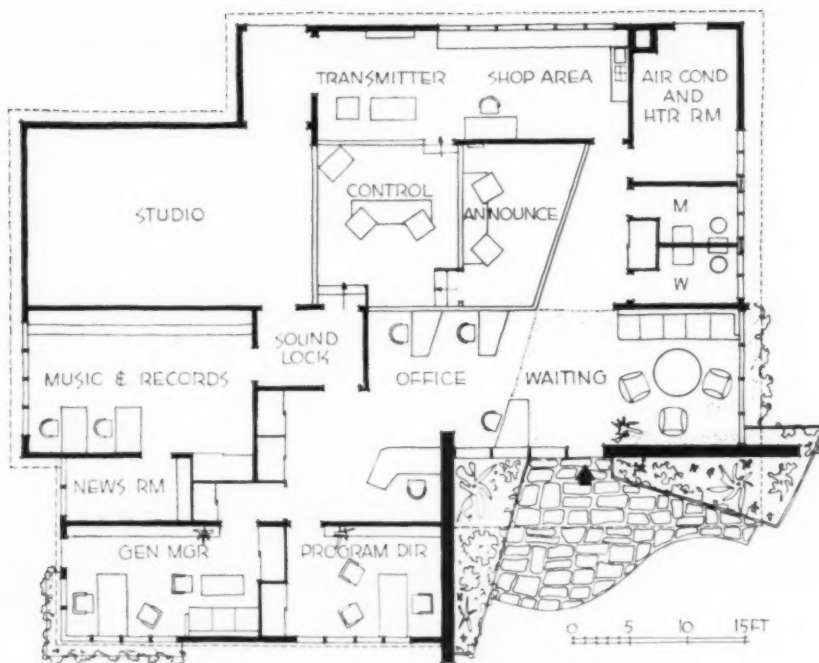
### Station W A L K



Above: entrance has an easygoing residential character, appropriate both to the station's size and to its location

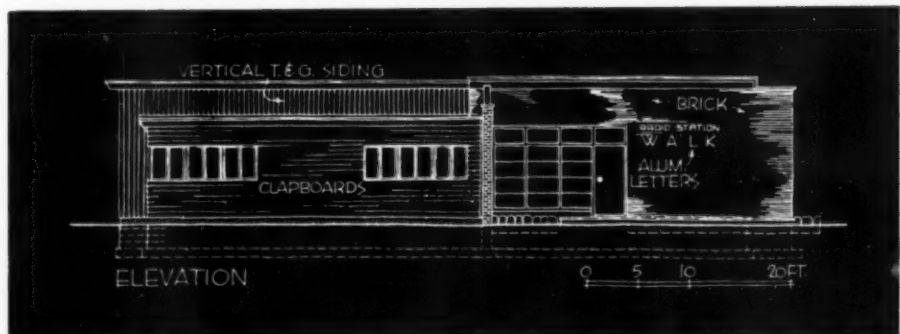
The relaxed, casual quality of this building for a small radio station is in keeping with the nature of the community served by its facilities. Suffolk County is at the eastern end of Long Island, too far for easy suburban commuting, so that despite its comparative proximity to New York City, it enjoys the somewhat less hectic pace of life reflected here. The plan of the building is fairly uncomplicated for a structure of its type, and accommodation of offices, studio and equipment was handled simply. Construction is wood frame. Exterior walls are finished with vertical and horizontal natural cedar siding and brick. Interior walls are plaster and acoustic tile. Foundations have concrete footings with concrete block walls.





Plan combines simple separation of areas with easy communication between them. Note the sound lock leading into the large studio

**Suffolk Broadcasting Co.**  
**Patchogue, L. I., New York**  
**Hart, Jerman and Associates,**  
**Architects**



Right: view from reception room into office area and announcer's booth. Light cove above sloping glass wall of booth provides indirect illumination. Below: section through building, showing ceiling construction



Gottcho-Schleiser

## COMMERCIAL BUILDINGS

THE BIG NEWS in commercial building is that government controls have been swept away by the Eisenhower administration's broom. In retrospect, architects will long remember January 13, 1951 as the gloomy day when the National Production Authority "freeze" on business structures began. During the ensuing two years, both commercial construction and building materials were under varying sorts of restrictions ranging from severe to mild. Despite gradual and continuing relaxation during 1952, the really significant relinquishment of control came with the "open-ending" of the Controlled Materials Plan on February 16, 1953, together with the announcement that CMP will cease to exist on June 30th of this year.

What does this development mean to architects? It means that now, for the first time in two years, you can plan and your clients can build any type of commercial building of any size, using any materials\* available on the open market. Supplies of steel, copper and aluminum are reported normal or nearly so, with no foreseeable serious shortages in the offing. Despite the dire predictions attending the removal of price ceilings, material costs have so far remained fairly level.

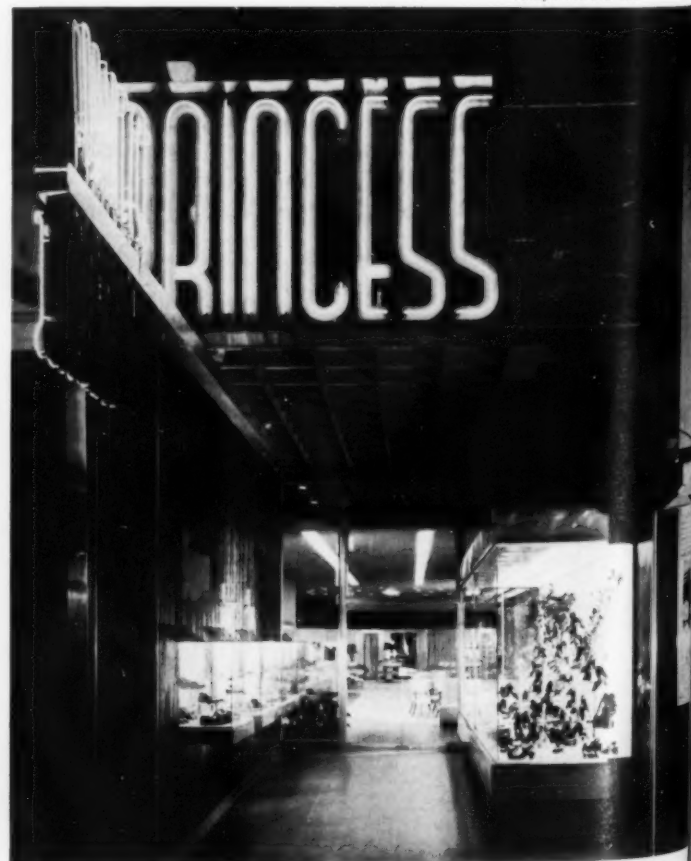
The long pent-up demand now set free resembles a flood tide in its magnitude. In both money value and floor area the recent expansion in commercial † building volume is little short of fabulous. From Dodge Reports gathered in 37 eastern states and in terms of *actual contracts awarded and under construction* (not estimates) we find that during January and February of this year dollar volume (in millions) is a whopping 187,442 as against 117,876 for the corresponding two months of a year ago: an increase of 59 per cent! The floor area provided by these dollars is 15,098,000 sq ft for the first two months of 1953 versus 8,629,000 for the same period of 1952: a sharp jump of 75 per cent! There is no evidence of any softening of demand in the near future — on the contrary, all signs point to a continuing expansion.

Such a situation brings upon the profession the sort of opportunity that architects and engineers dream about, and should offer espe-

cially great potentialities for both younger practitioners and smaller firms, since the changing population pattern has given rise to widespread suburban development, with its typically smaller and lower structure for business and professional use. There will be many such, and architects should find that any study or promotion they are able to undertake in this field should yield tangible dividends. Most architects will probably agree that commissions of this kind, even when carefully studied, usually permit the pocketing of a greater proportion of the fee than do residential jobs, with their relatively greater expenditure of time.

The challenge that this opportunity throws down is to design increasingly better commercial architecture, because good design pays off. It pays off for the architect in terms of profes-

Joseph W. Molitor



\* Except for nickel-bearing stainless steel, which will remain under DMS regulation.

† Included in this category are stores, office buildings, banks, restaurants, commercial warehouses, garages, and filling stations.



## A RARE OPPORTUNITY AND ITS CHALLENGE

sional prestige, personal satisfaction and further commissions; it pays off for the owner in higher rentals, better resale value, easier maintenance and greater flexibility of use; it pays off socially by doing its share to make the community more attractive, a better place in which to live and work.

Many useful ideas are contained in this 25-page study: there is a total of twelve projects included in the portfolio which follows. The work shown ranges from small to medium in size, the largest example being the new Bullock's suburban branch in Westwood Village, Calif. There are four stores, four small office buildings, and four small professional buildings. These examples have been carefully selected from the great volume of good work that is going forward all over the nation.

During the past ten years, ARCHITECTURAL RECORD has reflected activity in the category of commercial buildings, both large and small, and has during that time presented these eighteen Building Types Studies:

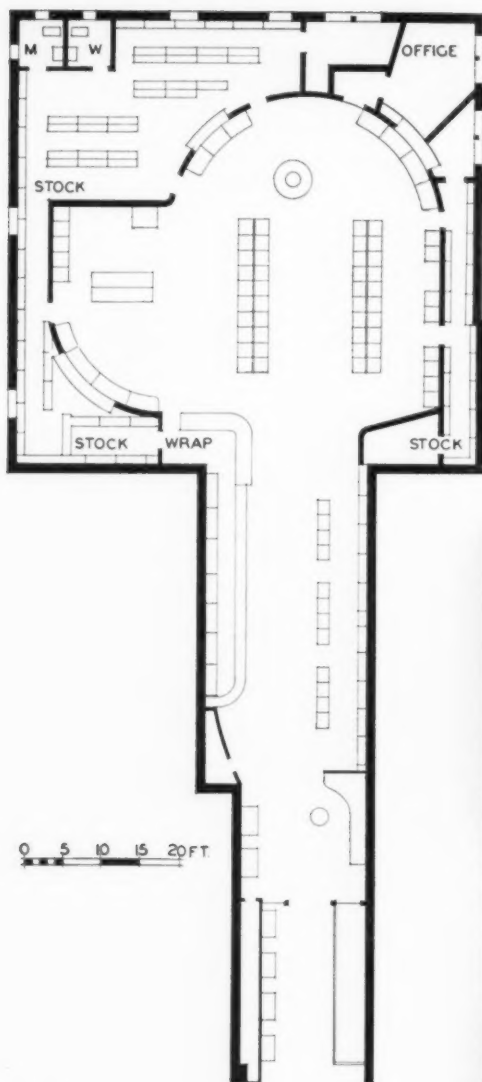
May 1942.....Smaller Building Construction	October 1947.....Office Buildings
April 1943.....Commercial Centers	April 1948.....Stores
February 1944.....Service Stations	January 1949.....Office Buildings
October 1944.....Laundries	October 1949.....Shops and Small Stores
November 1944.....Department Stores	January 1950.....Small Business Buildings
February 1945.....Shopping Terminals & Stores	September 1951.....Small Office Buildings
March 1945.....Banks	June 1952.....Office Buildings
February 1946.....Stores	July 1952.....Store Design
February 1947.....Stores	January 1953.....Architects' Own Offices

In addition, ARCHITECTURAL RECORD'S book department published Dr. Louis Parnes' volume entitled *Planning Stores That Pay* in 1948.

## THE PRINCESS SLIPPER SHOP *Jackson, Miss.*

*Robert K. Overstreet, Designer for N. W. Overstreet Associates, Architects & Engineers*





## THE PRINCESS SLIPPER SHOP

**T**HE PROBLEM was to add a new, larger sales salon to an existing narrow store which was also to receive a new front calculated to lure customers inside. The result is a varied and pleasant succession of spaces ending in the salon shown on page 163. See also plan at left.

The entrance features a jet black sandblasted wood plank wall which serves as background for the small, waist-high display cases (below) which are complemented in turn by the mass display in the large window opposite.

Three types of lighting add variety to the scheme, the curving pattern of downlights in the salon being particularly effective.



Joseph W. Molitor



# PROTOTYPE FOR A CHAIN OF SERVICE STATIONS

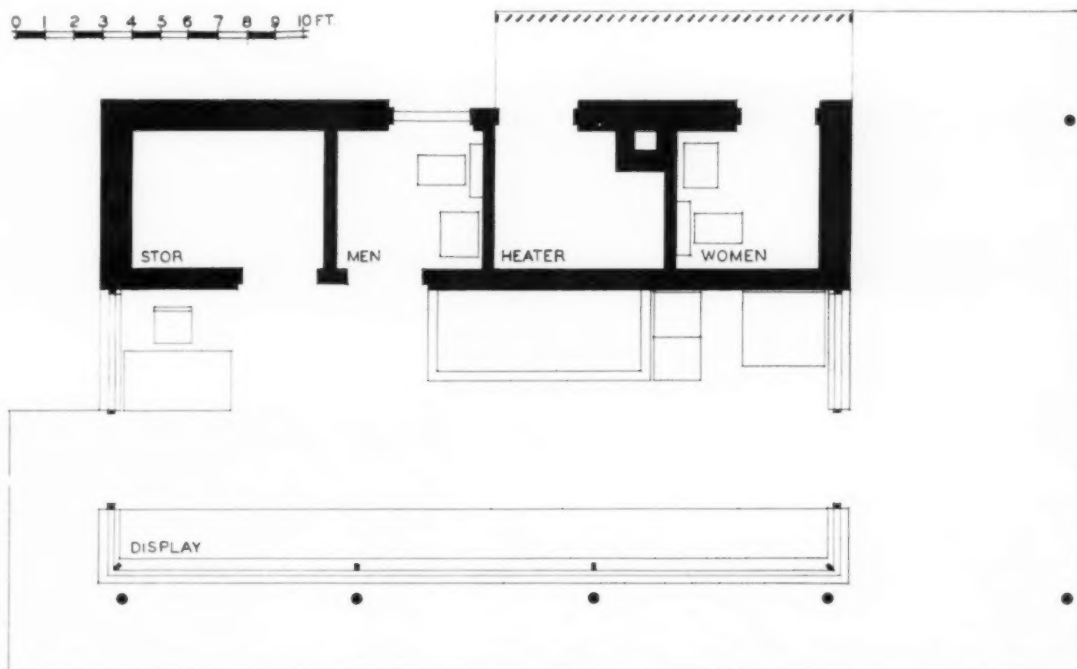
*Thorshov & Cerny, Architects*  
*Ted Sudano, Architect in charge*

OVER 20 gas stations scattered through Wisconsin and Minnesota have been built for the Erickson Company following this design, and more are coming. The scheme has been widely copied — proof of its success.

In order to compete with the big corporations, this small independent conceived the idea of making his stations sprightly, different and attractive, especially at

night — for nighttime service is another way to compete. Vivid red and yellow and white are used in combination with glass and smooth red brick.

The all glass front is important for it enables the attendants to see anyone approaching and swing into action, since really super service (also to meet competition) is a vital aspect of the operation.



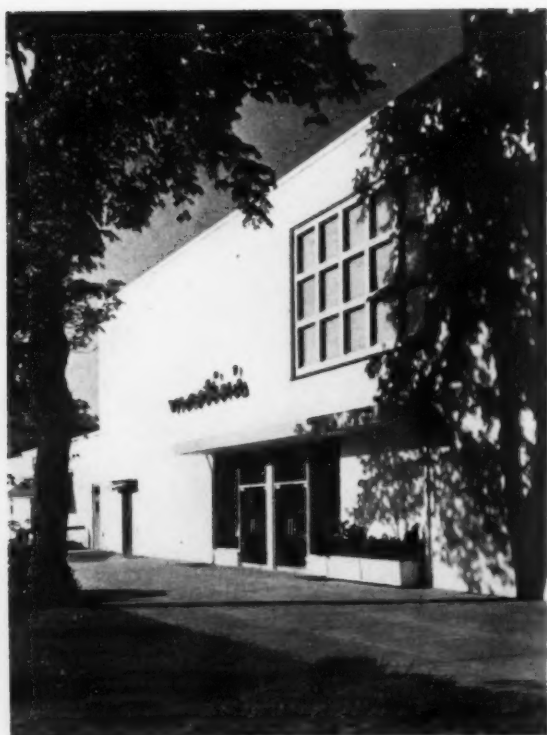




## GARDEN CITY BRANCH

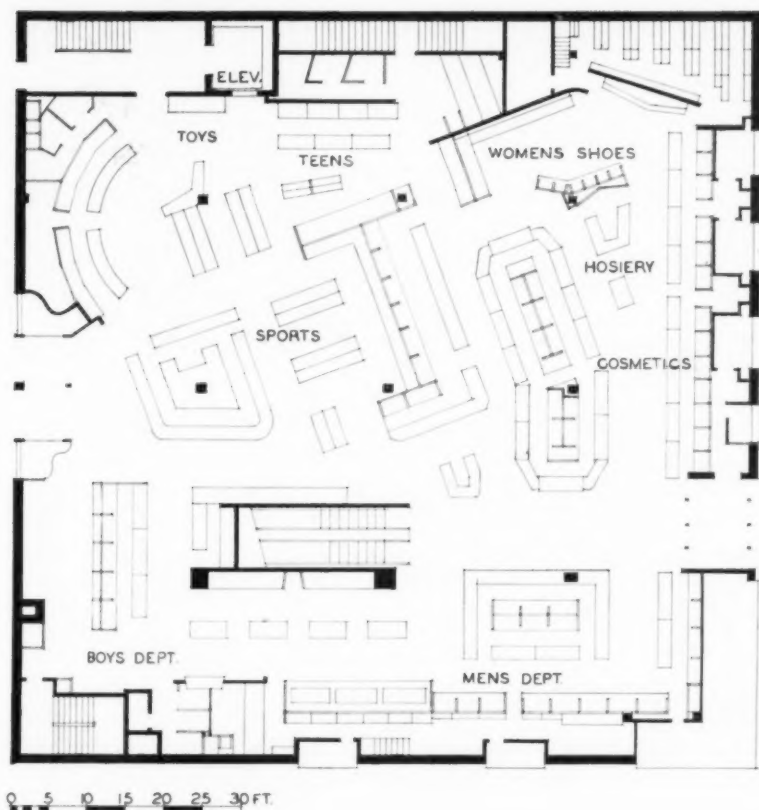
*Frank Majer, Architect*

THIS STORE, finished in the spring of 1952, is the first suburban branch for Martin's of Brooklyn, a department store. In planning, the architect carefully located and articulated the various departments in relation to pedestrian traffic flow, so that men seeking their department will not have to pass through a women's department, and vice versa. In general, young people's and sportswear, as well as impulse items such as gloves, jewelry, etc. are located at street level, while the higher priced dresses and gift shop are located on the second floor. The architect designed all interiors, including merchandising fixtures and lighting.



# FOR MARTIN'S

*Morris Lapidus,  
Associate Architect and  
Interior Designer  
McKim, Mead and White,  
Supervising Architects*



Gottsch-Schlesner







## BULLOCK'S WESTWOOD—A NEW SUBURBAN STORE

*Welton Becket & Associates, Architects & Engineers*

*Murray Erick Associates, Structural Engineers*

*Hillburg, Byler & Hengstler, Mechanical Engineers*

*Robert Herrick Carter, Landscape Architect*

LOCATED IN WESTWOOD VILLAGE, in suburban Los Angeles, this department store with restaurant on its top floor is especially interesting for its 3-level arrangement of parking and access. By closely correlating garaging and retailing, the architect has achieved a scheme that permits the customer to park his car only a few yards from and at the same level as the section he is visiting. Total parking space will handle 1000 cars.

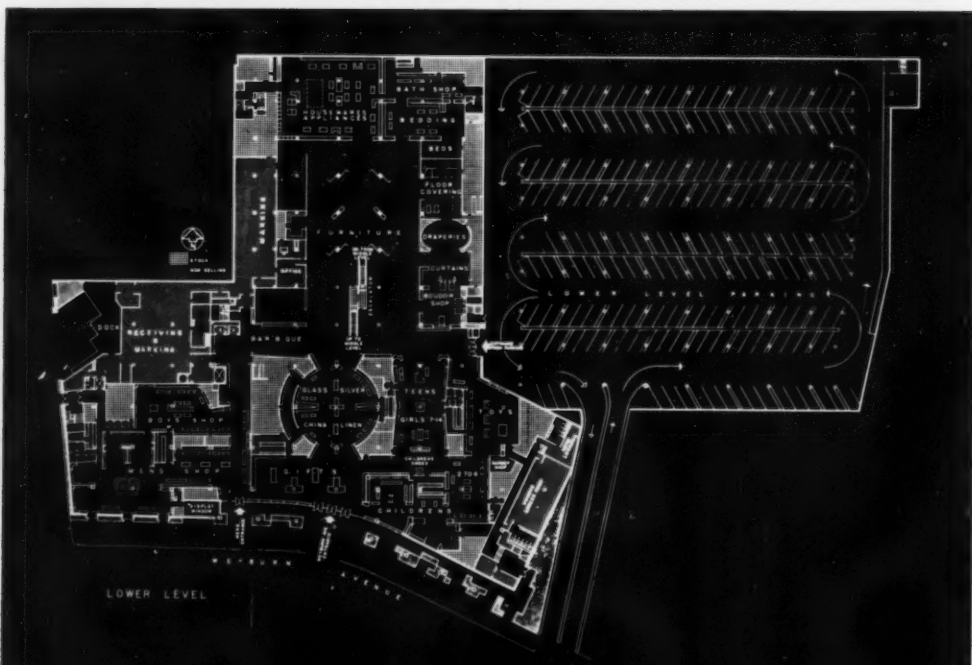
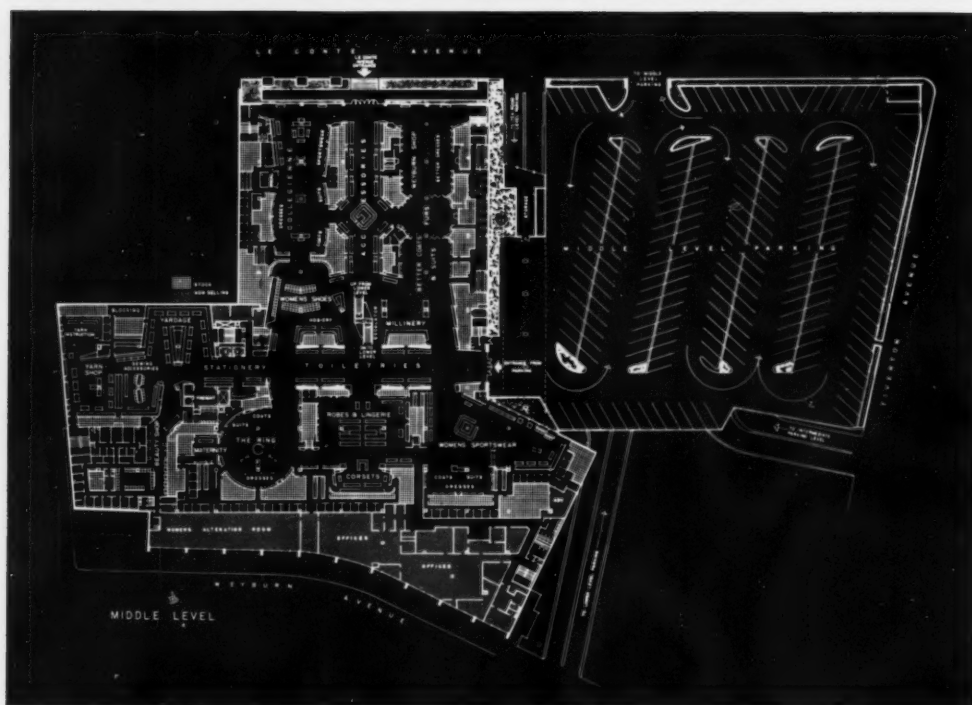
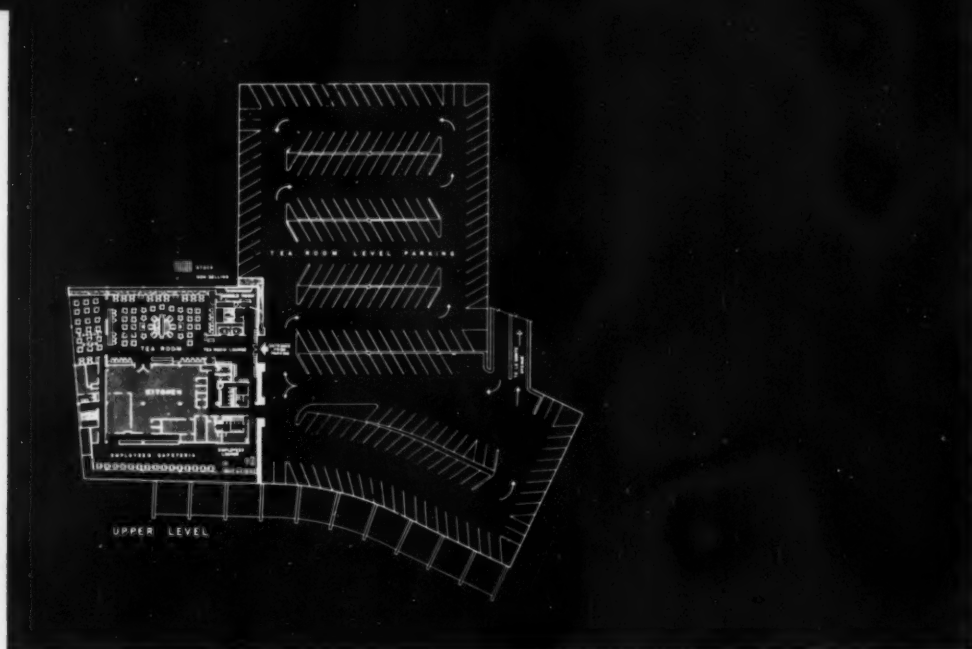
The design capitalizes on the natural slope of the 4-acre site by providing two principal merchandising levels, each with its pedestrian entrance directly from the street, as well as making possible parking at each level. Six entrances enable the shopper to reach his destination in the shortest possible time, whether he arrives on foot or by car.

Working closely with Raymond Dexter, Bullock's planning director, the architect completely designed the interior, including dress labels and wrapping paper.

RETAIL STORES



Douglas M. Simmonds



## BULLOCK'S WESTWOOD



Douglas M. Simmonds

The three plans at left show how the three levels are articulated for both pedestrians and cars. Photo at left, above, shows top floor, which houses the restaurant. Middle level ramp entrance from the street is shown above, right. In the photo of the entrance detail at right, note the oversized faience tile which was designed by the architect for this job and used on several of the building's elevations



RETAIL STORES



## BULLOCK'S WESTWOOD



Douglas M. Simmonds



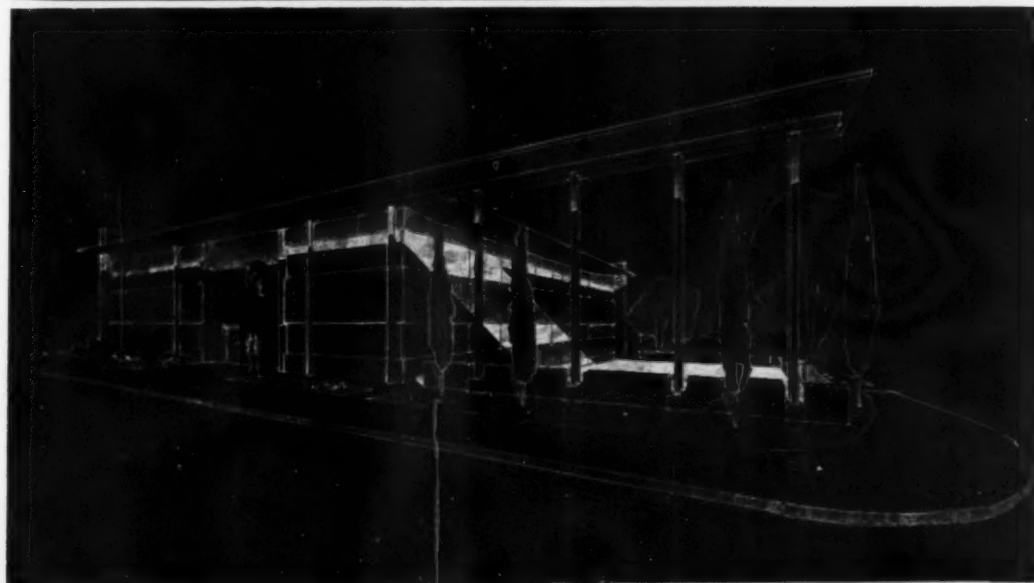
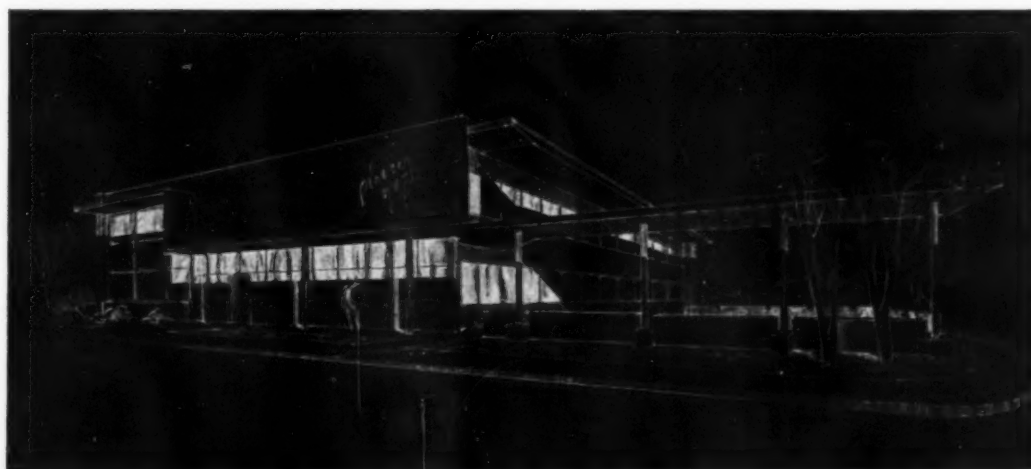
*Several materials are used for the exterior walls: concrete painted pale green, Arizona mint stone, fieldstone, and architect designed large size faience tile. The extensive use of tropical planting emphasizes the California character of the store's appearance*



## AN INSURANCE BUILDING IN MISSOURI

*The Ploeser-Watts Co., Clayton, Mo.*

*Hari Van Hoefen, Architect*



*The architect's preliminary design sketches*

## THE PLOESER-WATTS BUILDING

*Hari Van Hoefen, Architect*

THE OWNERS of this office building, the Marine Underwriters Corporation, were located for years in downtown St. Louis, moved to suburban Clayton five years ago, last year decided to build their own quarters there. To help with the overhead they built additional rental space which is now occupied by four tenants who likewise moved from downtown St. Louis.

So that the building could open southward with large glass areas the structure was located at the northern end of the plot. Such a scheme seemed natural for the other reason that it then became possible to depress

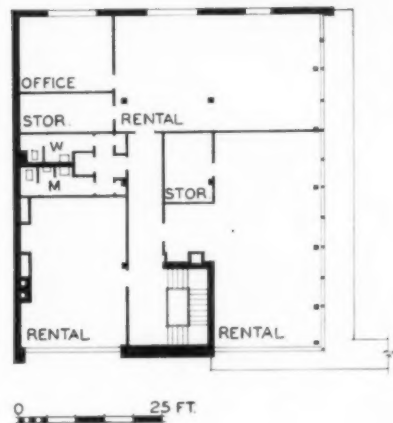
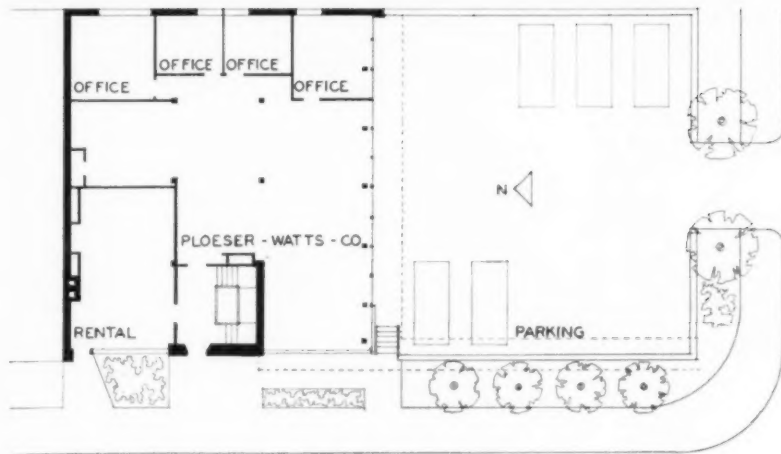
slightly the southern portion of the plot so that it would conform to the level of the side street and thus provide level automobile entrance and parking. The canopy ties parking and building together — gives the latter a sense of protection from the main street above it — houses flush floodlights for the parked cars.

The structure is steel frame fireproofed with vermiculite plaster on metal lath; floors and roofs are precast slabs with asphalt tile floor finish and acoustical tile ceiling finish; all interior partitions are 2-in. solid plaster; sidewalks are green cement.



Piaget Studio

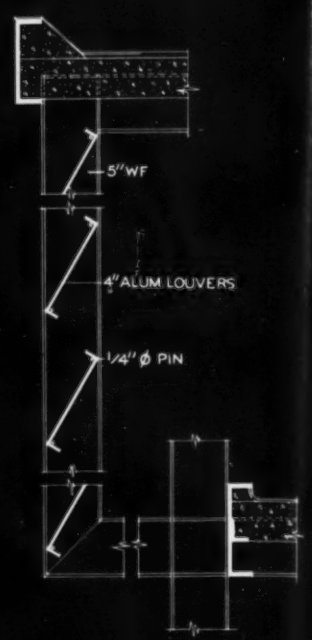




The frames for the exterior sealed double-glass units are extruded aluminum double hung window sections, shop fabricated. Spacing the glass frames, ducts, and lighting fixtures on a 5-ft module throughout the building creates a pleasing sense of order



## SMALL OFFICE BUILDINGS



112



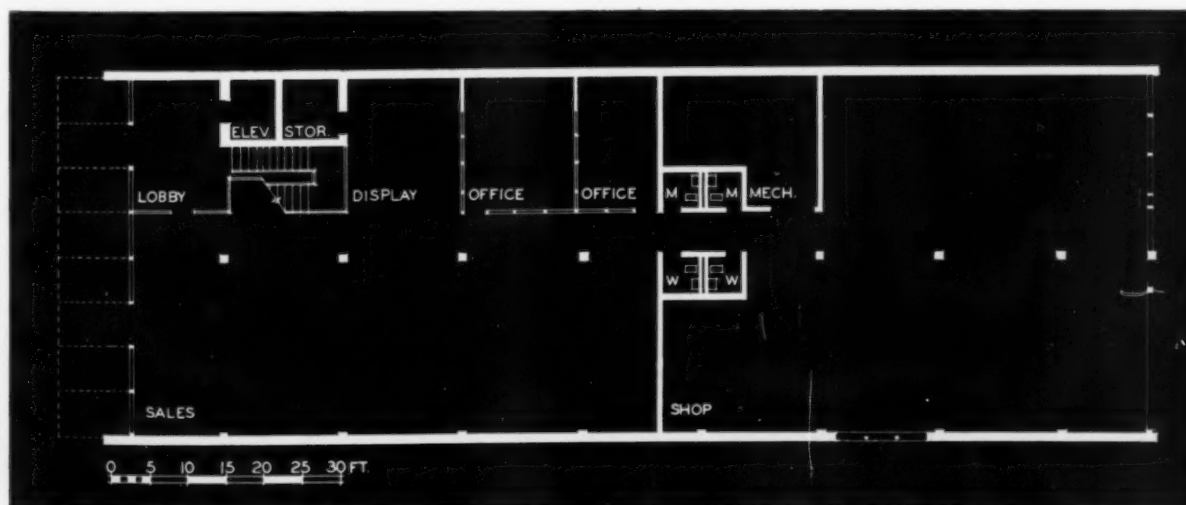
Ulric Meisel—Dallas

## CLARKE & COURTS BUILDING, HARLINGEN, TEXAS

*Cocke, Bowman & York, Architects*

IN TEXAS, the blazing southern sun must (as the architects put it) be "broken down" — and this building's most intriguing feature stems from that need. It consists of aluminum louvers in a cantilevered framework which serves also as construction for indirect sidewalk lighting. The 6-ft. spacing of the verticals is repeated in

the façade proper, resulting in an interesting interplay of glass versus void versus louver in three dimensions. Both visitors to and tenants of the offices above pass through a glass enclosed lobby and stair, thus view the owner's tempting display of office equipment each time they enter and leave.







## UNITED PACIFIC INSURANCE CO., LOS ANGELES

*Paul R. Williams, Architect*

*Samuel Kaye, Mechanical Engineer*

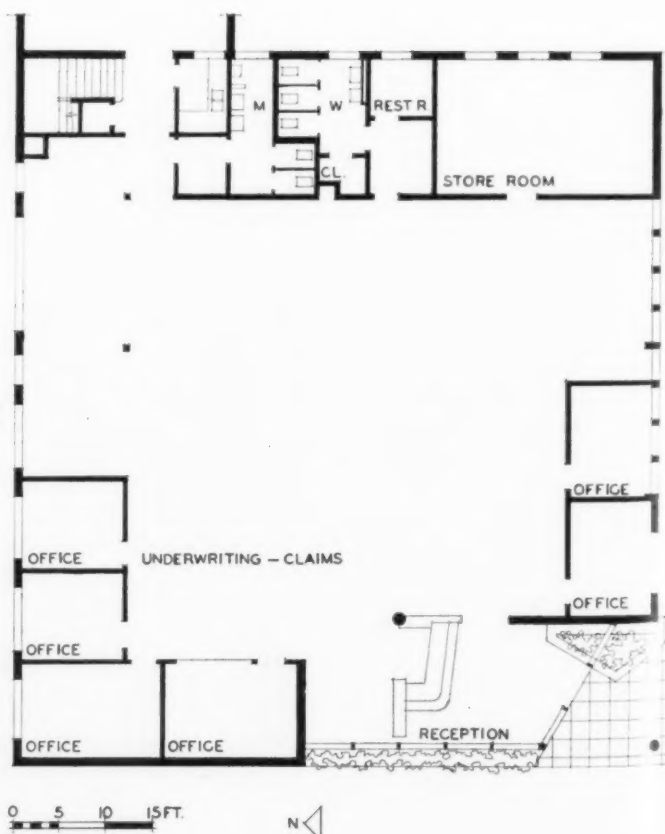
*Morris K. Goldsmith, Structural Engineer*

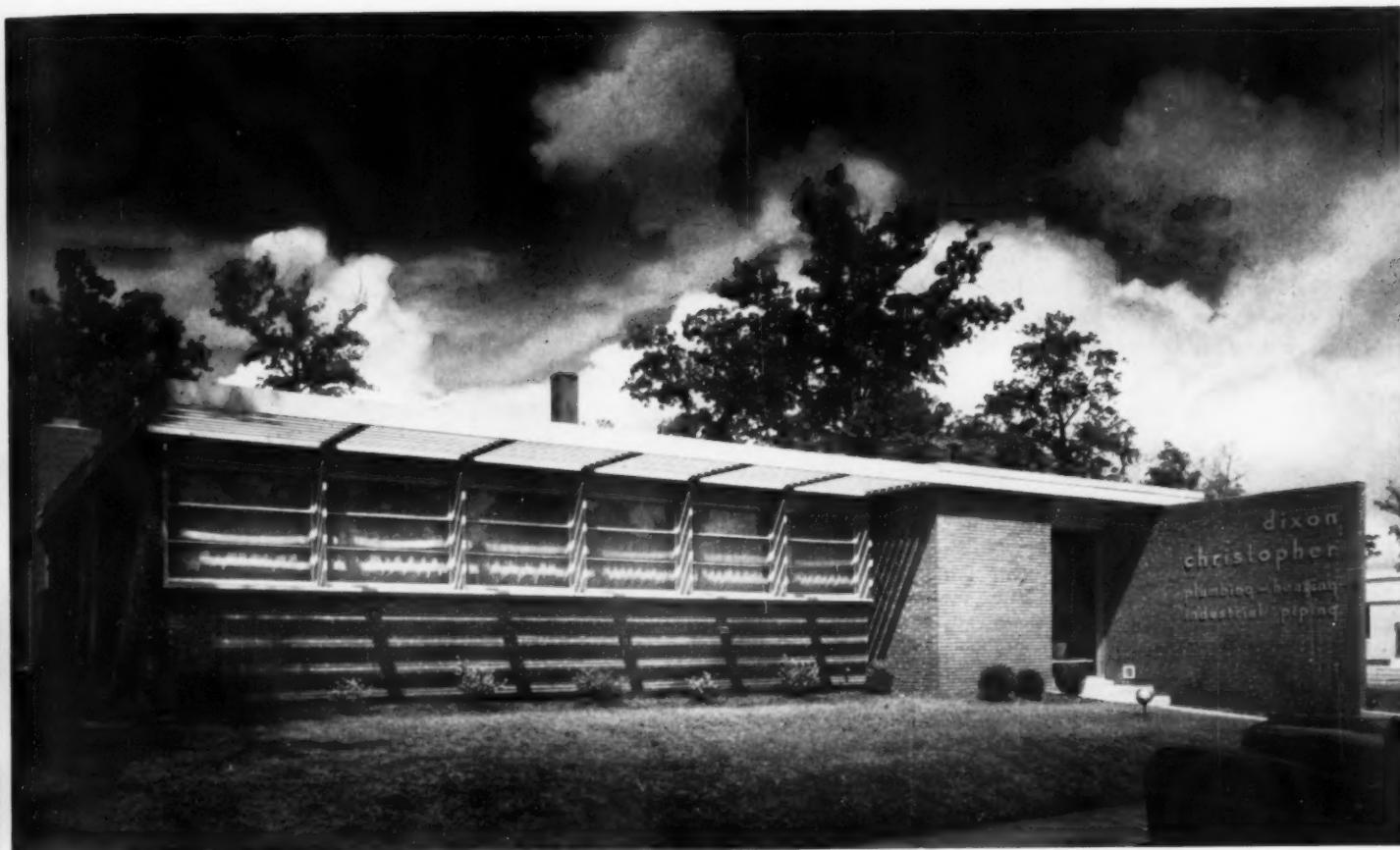
*George O. Chapman, General Contractor*

THIS ONE-STORY and mezzanine office building provides certain private offices for regular use by executives and others for intermittent use by salesmen. The large general office space opens pleasantly into the reception lobby, a low railing serving as separation for the two. The mezzanine at the rear contains an employee's lounge and lunch room; opens through sliding doors to a sun deck.

Exterior design feature is the horizontal canopy slab at the entrance, which continues on into the all glass lobby to form its ceiling. The exterior walls are brick painted a soft gray green.

All interiors were designed by the architect; private offices are panelled in oak veneer; the general office walls are brick painted tan; plaster plaques on the rear wall were executed by Sylvestri Studios.





## OFFICE FOR A PLUMBING & HEATING CONTRACTOR

*Dixon-Christopher Office, Greensboro, N. C.*

*Edward Loewenstein, Architect*

**B**UILT FOR A FIRM which engages in engineering and contracting, this attractive office building is located in a rapidly growing commercial area formerly an army base. The old warehouse at the rear has recently been replaced by storage and work sheds.

The wood frame and brick structure contains interior partitions of striated plywood or pine planks on studs; asphalt tile floors; acoustical tile ceilings.

The sunshade at the southwest office windows has proved effective in reducing the air conditioning load.



Joseph W. Molitor

# OPTOMETRIC AND DENTAL CLINIC IN SHREVEPORT

*Samuel G. & William B. Wiener, Architects*  
*W. A. McMichael Construction Co., Builders*

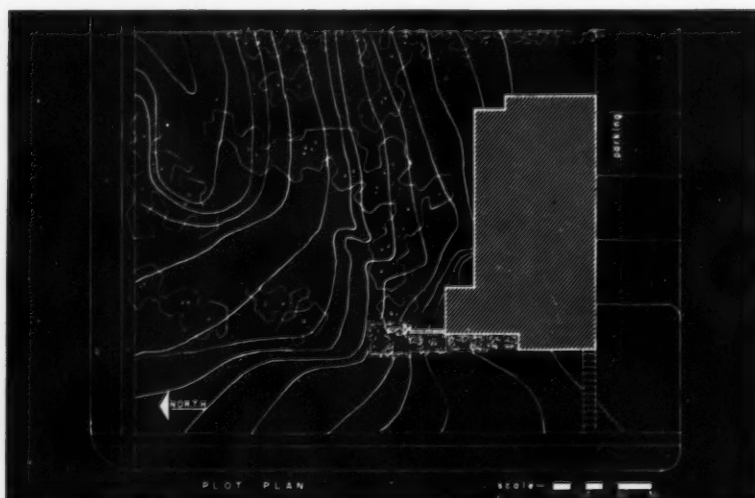
**T**HIS ATTRACTIVE CLINIC was designed to meet the needs of the owner-optometrist and to provide in addition a dental suite and lab for rental. The sloping corner lot influenced the plan of the structure, which is oriented north and south with dental suite, lab and waiting room on the north (light) side, and with optical

rooms on the south (dark) side. Easy access to parking by way of the side alley was gained by placing the clinic on the high north portion of the lot. The exterior walls are brick or vertical siding; note especially the skillful handling of brickwork expansion joints at the terraced portion of the building.

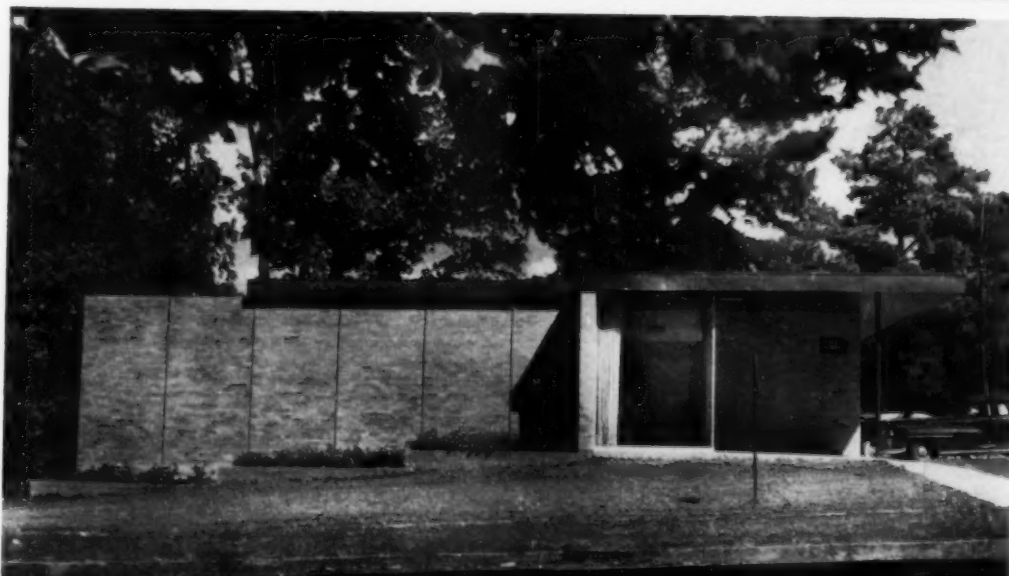
SMALL PROFESSIONAL BUILDINGS



Clarence John Laughlin

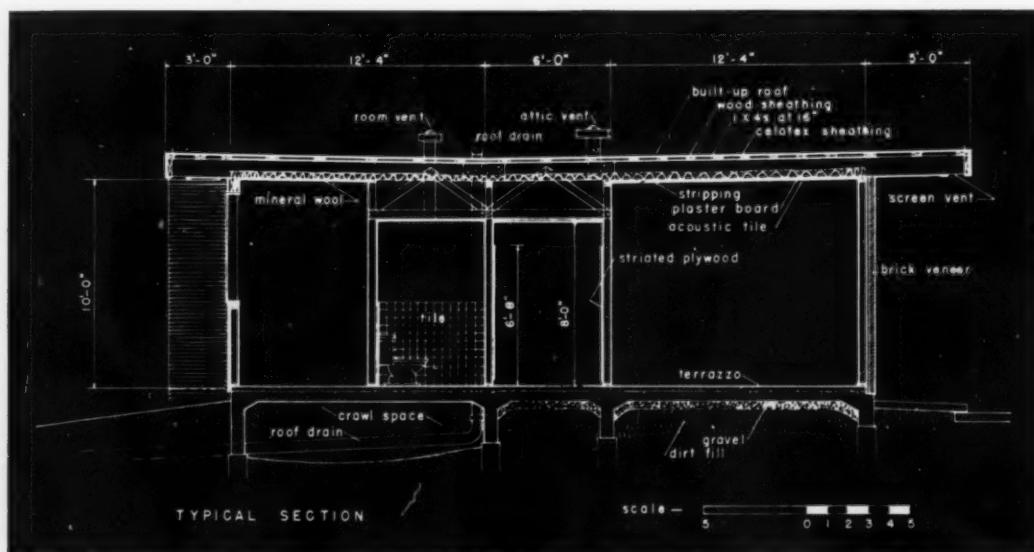
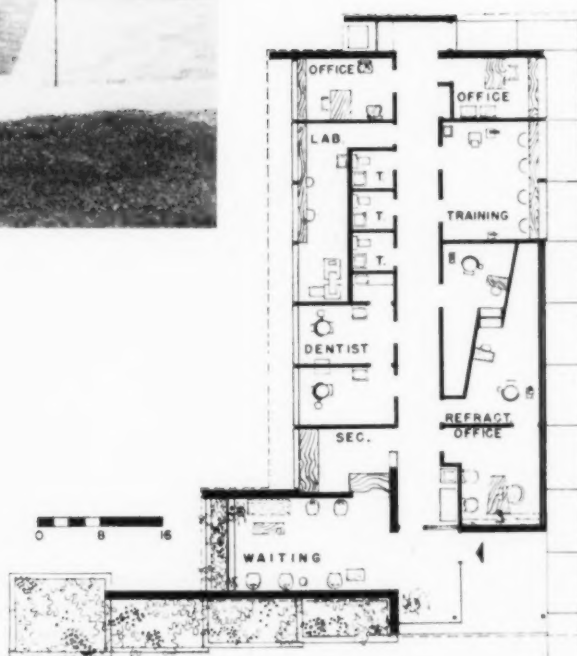








The posts which support the wood roof beams are 3-in. square steel tubes spaced 8 ft. on centers which rest on a foundation system of concrete grade beams on concrete piles. The unique and economical system of stud and joist bridging consists of stock 1½-in. plastering channels let into the wood and nailed. By placing and polishing the terrazzo floor before the superstructure was erected, savings in time and money were achieved.



## SMALL PROFESSIONAL BUILDINGS

*Interior finishes: ceilings are 12-in. square acoustical tile cemented on plasterboard; walls are striated plywood (natural or painted) and mahogany plywood; floors are terrazzo throughout; walls of toilets are painted fir plywood or ceramic tile*

Clarence John Laughlin







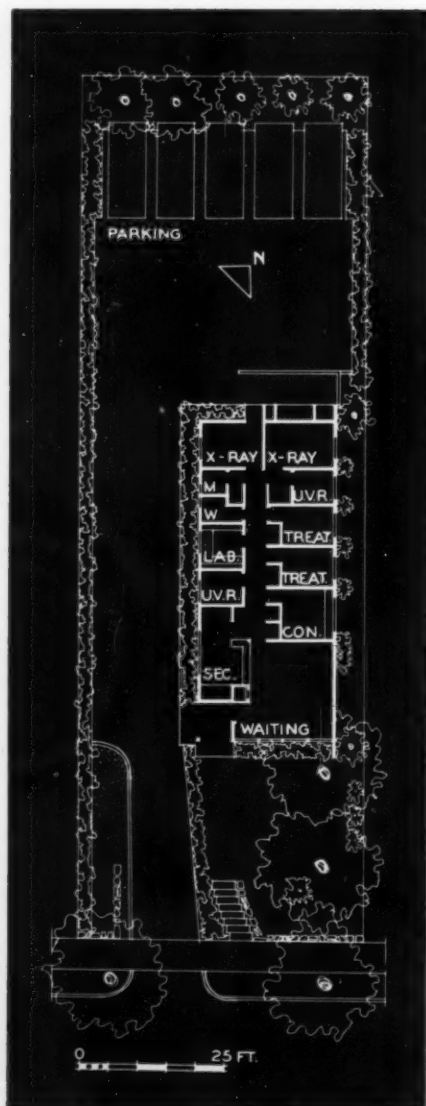
Frederick R. Dugger

## CALIFORNIA DOCTOR'S OFFICE

*Lulah Maria Riggs, Architect*

*Arvin B. Shaw, III, Office Director*

*Clayton Wesley Cook, Contractor*



THE OWNER of this building, a dermatologist, found it necessary to build new quarters within sixty days in order to carry on his practice, since he had been forced to vacate his former space on short notice. The resulting building is a pleasant one with the shaded glass wall of the waiting room opening out to the south. The scheme provides for simultaneous multi-patient treatment, common practice in the dermatological field, and includes two X-ray treatment rooms, two ultra-violet rooms, a lab, secretarial space, and office.

Built on a reinforced concrete foundation, the structure is 2 by 4 studs with painted stucco exterior finish and integrally colored interior plaster finish. The roof is red tile in accordance with zoning requirements for this part of Santa Barbara.

# FLEXIBILITY FOR POSSIBLE FUTURE CONVERSION

*Pearson, Tittle & Narrows, Architects*

*Mosley & Yarborough, Engineers*

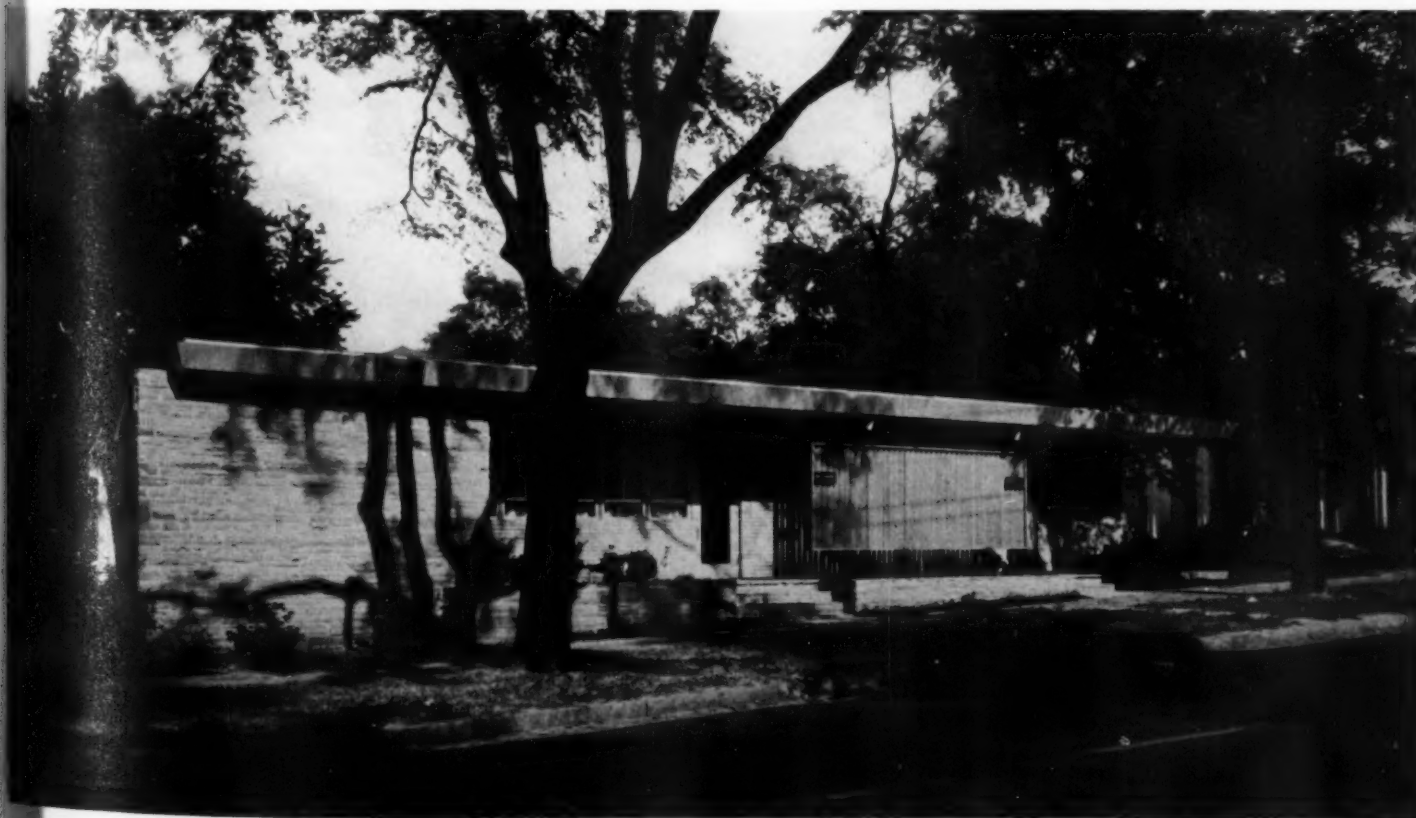
*Bear Bros. Construction Co., Builders*

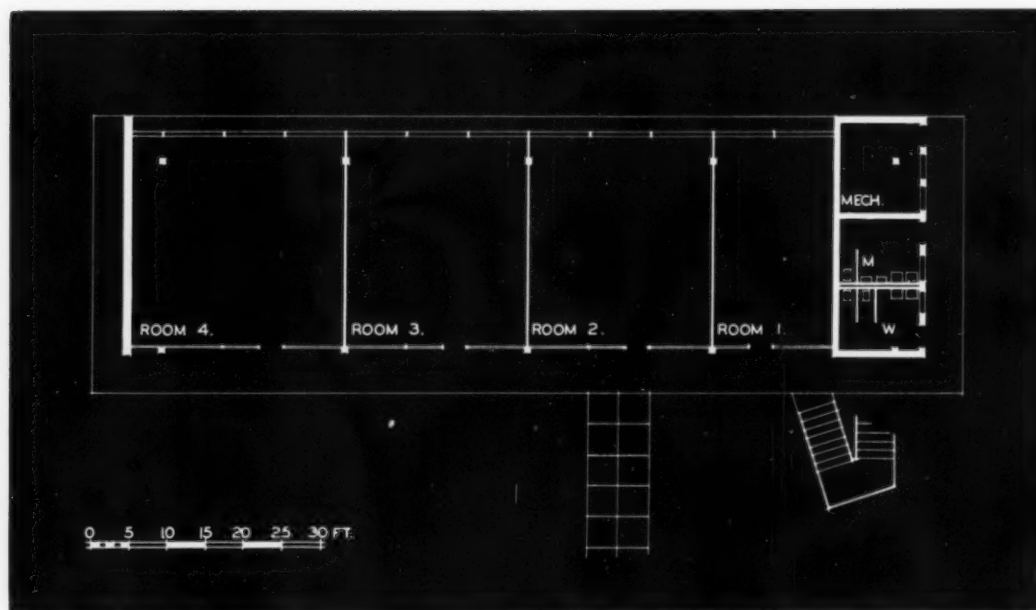


**T**HIS building, which received an award at the A.I.A. Gulf States Regional Convention in the fall of 1951, is notable for its two-part yet flexible plan. The owner, a pediatrician, wanted a building for himself and one other doctor, so arranged that it could easily be converted either into his own clinic or disposed for other types of business offices. This was accomplished by

providing in-line corridors for both suites, separated only by a storage closet and lab counter which can easily be removed to make the corridor one. All partitions are non-load-bearing, thus providing maximum flexibility. The owner's suite features a children's waiting room opening to an outdoor play terrace. Due to the small lot, no public parking was required.

Jack Holmes





## PROPOSED ARCHITECTS' BUILDING IN PHOENIX

*Edward L. Varney Associates, Architects & Engineers*

WITH FIVE ARCHITECTS' OFFICES within two blocks, this enterprising practitioner envisioned a building center which might house not only those offices, but also engineers, manufacturers' agents, materials showrooms, and others connected with the building industry. The plan and rendering show the design for this projected structure, which is planned to be built following the

lift-slab technique. Circumstances forced postponement of that scheme in favor of proceeding at once with space for the architect's own offices, which will be housed in a one-story steel-framed structure to be enlarged, as conditions demand, to a two-story building. Later, the original lift-slab building will be erected in front of Varney's office, with a planted patio between.



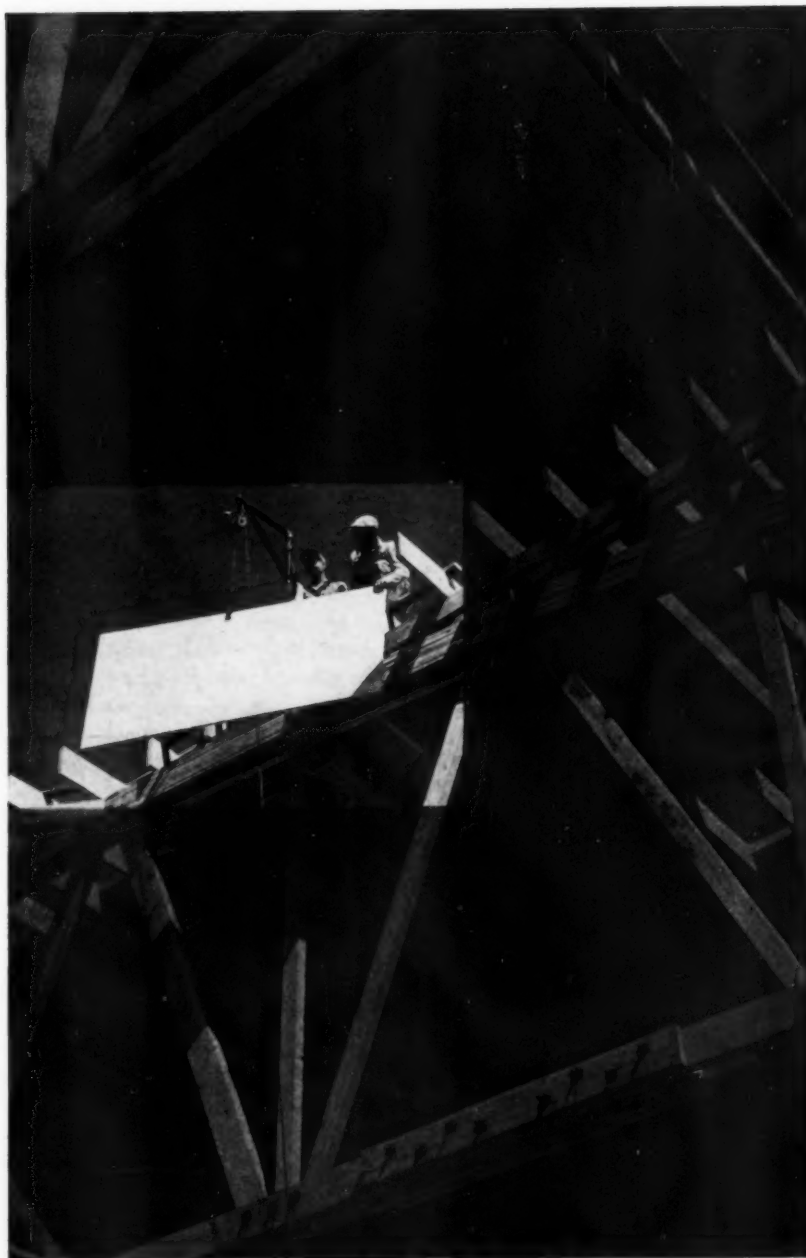


Part 1 | Grades, Uses and  
Methods of Application

## STRUCTURAL APPLICATIONS OF PLYWOOD

By Frederick F. Wangaard,  
Professor of Forest Products, Yale University

Plywood today is a very familiar structural building material, but engineering developments in recent years promise to make it even more versatile. For example, recent tests have furnished accurate data for the design of nailed plywood panels in roofs and floors to resist wind and earthquake loads. This two-part article follows a previous one by the author on "Interior Applications of Plywood." (Nov., 1951)



Douglas Fir Plywood Assn.

STRUCTURAL PLYWOOD is a relatively new building material. Although the forerunners of structural plywood preceded it by at least one hundred years, the development of this product as we know it today dates clearly from the Douglas fir panels that were first introduced at the Lewis and Clark Exposition held in 1905.

Those early plywood panels were utilized almost exclusively in the pro-

duction of doors. Slowly at first, and then with increasing momentum, the plywood industry grew and the uses of plywood expanded until billions of square feet are now being produced annually for a thousand uses.

The early glues were almost completely lacking in water resistance. In 1923, however, moderately moisture-resistant soybean glues were developed, and by 1927 Douglas fir plywood glued with this adhesive was finding increasing application as a structural material for interior use.

Even with this limitation, however, its place in house construction had not yet been realized, as witnessed by the publication in 1929 of an authoritative report<sup>1\*</sup> on frame wall construction which failed to mention plywood. Rapid developments in construction in the years immediately following led to the publication in 1934 of a supplementary report dealing with plywood as a structural covering for frame walls.<sup>2</sup>

The introduction in the mid 1930's of waterproof thermosetting phenolic resin adhesives led rapidly to the production

\* Numbers indicate references in the bibliography at the end of the article.

Grade	Face	Back	Inner Plies *	Additional Limitation
A-A, Int. (Sound 2 Sides, Interior)	A (Sound)	A (Sound)	D (Utility)	Sanded two sides
A-B, Int. (Sound/Solid, Interior)	A (Sound)	B (Solid)	D (Utility)	"
A-D, Int. (Sound 1 Side, Interior)	A (Sound)	D (Utility)	D (Utility)	"
B-D, Int. (Solid 1 Side, Interior)	B (Solid)	D (Utility)	D (Utility)	"
C-D, Int. (Sheathing, Interior)	C (Ext. Back)	D (Utility)	D (Utility)	Unsanded grade; no belt sanding
B-B, Int. (Concrete Form, Interior)	B (Solid)	B (Solid)	C (Ext. Back) (All inner plies)	Edge-sealed and, unless otherwise specified, mill-oiled. Sanded two sides

\* Except center ply of panels with 5 or more plies.

Grade	Face	Back	Inner Plies	Additional Limitation
A-A, Ext. (Sound 2 Sides, Exterior)	A (Sound)	A (Sound)	C (Ext. Back)	Sanded two sides
A-B, Ext. (Sound/Solid, Exterior)	A (Sound)	B (Solid)	C (Ext. Back)	"
A-C, Ext. (Sound 1 Side, Exterior)	A (Sound)	C (Ext. Back)	C (Ext. Back)	"
B-C, Ext. (Solid 1 Side, Exterior)	B (Solid)	C (Ext. Back)	C (Ext. Back)	"
C-C, Ext. (Sheathing, Exterior)	C (Ext. Back)	C (Ext. Back)	C (Ext. Back)	Unsanded grade; no belt sanding
B-B, Ext. (Concrete Form, Exterior)	B (Solid)	B (Solid)	C (Ext. Back)	Edge-sealed and, unless otherwise specified, mill-oiled. Sanded two sides

of exterior plywood and opened the way to innumerable new uses for this versatile structural material.

Engineering developments, too, contributed to the phenomenal rise in the acceptance and use of plywood. In 1940, Newlin at the Forest Products Laboratory laid a groundwork for design methods applicable to plywood that embodied the stressed-skin principle.<sup>3</sup> Today Douglas fir plywood has come to be as well known as the lumber product of this species and is used as paneling, flooring, sheathing, exterior siding, concrete forms, and for hundreds of other purposes. The trend toward increasing use of Douglas fir plywood is clearly shown by the production statistics of the industry for the period 1925-1951 as plotted in Fig 1.

## Types and Grades of Plywood

Plywood types and grades are specified in Commercial Standards covering both Douglas fir and hardwood plywoods.<sup>4</sup> Inasmuch as most structural

plywood is Douglas fir, the following discussion will be limited to that species.

Two types of Douglas fir plywood are recognized in the Commercial Standard. These are the interior and exterior types. Interior plywood is usually bonded with soybean glue and is intended for permanent interior service but is also capable of resisting temporary weather exposure such as that encountered during construction. Exterior plywood is made with a hot-press phenolic resin adhesive and is designed to withstand permanent exposure to the weather.

Douglas fir plywood grades are based upon the quality of veneer employed in the face and back plies. Four veneer grades — A, B, C, and D — are recognized. These grades were described in the previous article. The quality of veneer required for each of the six grades of interior type plywood is indicated in Table 1. Similar requirements for the six grades of exterior type plywood are presented in Table 2.

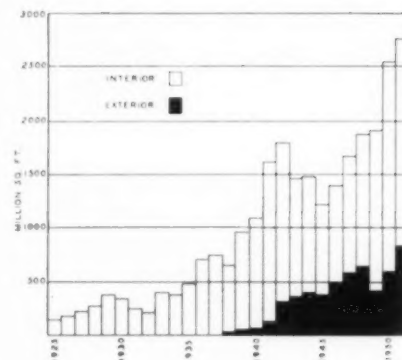


Fig. 1: Production of Douglas fir plywood, 1925-1951. Development of plastic adhesives in the mid 1930's and the introduction of stressed-skin panels for prefabricated structures in 1940 greatly stimulated the usage of plywood for exterior applications





Prefabricated plywood grain bins in South Dakota

All photos Douglas Fir Plywood Assn.

The **A-1, A-B, A-D (Plypanel), and B-D (Plybase)** grades of interior type plywood are most commonly employed as interior wall coverings, ceilings, partitions, and as backing for floor coverings. These grades were discussed in the article previously referred to. More important from the structural standpoint are the remaining grades: sheathing (Plyscord) and concrete form panel (Plyform).

**Interior grade C-D plywood, known as Plyscord,** is an unsanded panel supplied in  $\frac{5}{16}$ ,  $\frac{3}{8}$ ,  $\frac{1}{2}$ , and  $\frac{5}{8}$ -in. thicknesses and intended primarily for use as wall and roof sheathing and as subflooring. The defects permitted in this grade do not affect its serviceability for these uses. This grade frequently sees dual service, first as concrete form material for basement walls, with subsequent re-use as subflooring in the same structure.

**Interior grade B-B plywood (Plyform)** is a multiple re-use concrete form panel. Face plies are solid, although

tight defects are permitted in this grade. The panels are sanded on both surfaces to permit the forming of smooth paintable concrete surfaces. This grade is edge sealed (green sealer for identification) and mill-oiled, unless otherwise specified. When properly maintained by re-oiling and suitable storage, as many as 12-15 re-uses of these plywood panels may be obtained.

**Exterior grades A-A and A-B** are available for uses in which the appearance of both face and back of the panels is critical. In both grades the face ply is sound and free of knots although neat patches are accepted. This is also true of the back ply of the A-A grade, whereas in the A-B grade the back ply, while paintable, may reveal minor surface defects through the paint coating unless special care is taken in finishing. Both face and back are sanded.

The most versatile grade of exterior plywood is the **A-C grade known as Plyshield**. The face of a Plyshield panel presents a smooth sound surface for

painting, identical to that of the previously named grades of exterior plywood. As it is intended for uses in which only the face is exposed, the back ply may contain a limited number of knots and open defects such that the serviceability of the plywood is not materially affected. Both sides are sanded.

This is the grade commonly specified for exterior wall covering for homes, garages, stores, and other commercial structures. It is also frequently used for such architectural components as gable ends, porch and breezeway ceilings, eave soffits, shutters, and entrance treatments.

**Exterior grade B-C, known as Utility plywood,** is a relatively new grade suitable for exterior uses that do not require complete masking of defects. Both face and back are sanded and the face presents a relatively good appearance when painted. Numerous applications in various farm and camp structures are among the preferred uses.

**Exterior grade C-C, the Sheathing grade of the exterior type,** is an



Several of the now familiar structural applications of plywood that account for the billions of square feet being sold today, as indicated by the chart across page, are: (1) roofing and sheathing for houses. (2) underlayment for linoleum in a commercial building. (3) subflooring for a house, first used as concrete forms for the basement



## STRUCTURAL PLYWOOD

unsanded panel, completely waterproof, which is recommended for uses that require a strictly structural type of plywood. The open defects permitted this grade do not interfere seriously with its structural values and are offset by the greater thickness of the unsanded panel.

**Exterior Plyform grade B-B** is the most durable concrete form material available. Its sanded surfaces are comparable in quality to the interior Plyform grade but inasmuch as the exterior concrete form panel is bonded with a waterproof adhesive, its serviceability is limited only when the wood is literally worn away after prolonged re-use. Edges are sealed with a red sealer and the surfaces are generally mill-oiled.

### Interior Uses of Plywood

The structural applications of plywood are too extensive to enumerate in detail. Included among them, however, are such varied uses as siding panels, wall sheathing, subflooring, roof decking, interior walls and partitions, ceilings, eave soffits, underlayments for floor coverings, concrete forms, stressed covers for prefabricated panels, removable floors, hangar doors, girders and arches. A number of these uses are illustrated in the accompanying photographs. Some of the major structural applications of plywood are discussed in detail in the following paragraphs.

**Wall Paneling.** The Plypanel grade of Douglas fir plywood is adapted to wall paneling which is to be painted, finished in natural color or given a light stain glaze, enameled, or covered with wallpaper.

The Plybase grade approaches Plypanel in quality and should be suitable as a base for wallpaper or for canvassed and enameled finishes. In better construction panels  $\frac{3}{8}$ -in. thick are generally employed over studs spaced on 16-in. centers, although  $\frac{1}{4}$ -in. panels are often used for economy. The use of 6d finish or casing nails spaced 6 in. apart at the outer edges of the panel, and at 12-in. intervals on intermediate studs, is recommended for  $\frac{3}{8}$ -in. plywood. Fourpenny nails at the same spacings are similarly recommended for  $\frac{1}{4}$ -in. panels. Additional rigidity is provided when panels are applied horizontally across the studding.

The most satisfactory method of attachment from the structural standpoint is by gluing to the studs. By this method, which is ideally adapted to prefabricated construction, full advantage is taken of the stressed-skin principle. Other details

of installation were discussed in the previous article and will not be repeated here.

**Wall Sheathing.** The unsanded Plyscord grade of fir plywood is ideally adapted for use as a sheathing material of exceptional strength and rigidity. Table 3, based on tests conducted at the Forest Products Laboratory, illustrates the effectiveness with which plywood functions as a structural diaphragm in comparison with other sheathing materials in frame walls containing window and door openings.<sup>5</sup>

In these tests  $\frac{1}{4}$ -in. plywood nailed to the studs was shown to be twice as strong and rigid as 1- by 8-in. diagonal lumber sheathing in resisting shearing loads. The greater efficiency of plywood when glued to the frame is also clearly shown in the diagram, although this



Table 3  
Strength and rigidity of frame walls with door and window openings

Sheathing Material	Relative Rigidity *	Relative Strength *
1 x 8" Diagonal Sheathing	1.0	1.3
29/32" Fiberboard (8d nails, spaced 3" at all vertical edges, 5 1/2" to 6" elsewhere.)	1.6	2.1
Horizontal Sheathing (1 x 8" sheathing; 1 x 4" let-in braces; 8d nails, 2 per stud crossing.)	1.5	2.2
1/4" Plywood Nailed (6d nails spaced 5" at edges, 10" elsewhere.)	2.0	2.8
1/4" Plywood Glued to Frame	3.7	4.0

\* Relative values based on 1 by 8-in. horizontal sheathing without braces in a panel without openings taken as 1.0 for comparison.  
Adapted from Forest Products Laboratory Reports R896 and R1025.

The above values represent results of tests involving framing, sheathing, and bracing as indicated only, and do not represent ratios for complete walls including interior and exterior covers such as siding, plaster, etc.

practice is generally feasible only in prefabrication.

With 16-in. spacing of studs,  $\frac{5}{16}$ -in. Plyscord is the minimum acceptable thickness. For 24-in. stud spacing,  $\frac{3}{8}$ -in. plywood is the minimum thickness recommended. Nail spacing for attachment to studs and horizontal framing members is 6 in. at the panel edges and 12 in. at other bearing surfaces using 6d common nails. No diagonal bracing is required under these conditions. When  $\frac{5}{16}$ -in. sheathing is used, special grooved nails are recommended in the application of asbestos cement or wood shingle exteriors.

The tightness of plywood sheathing requires that particular attention be paid to ventilation and to providing a vapor barrier which should be located at the warm side of the wall. If the inside wall covering is plywood, an effective

vapor barrier is provided by back priming the plywood with two coats of asphalt or aluminum paint or by finishing the exposed faces.

**Roof Sheathing.** Plyscord is also the grade of plywood employed for roof sheathing. The minimum thickness accepted for rafters on 16-in. centers is  $\frac{5}{16}$  in., while for 24-in. rafter spacing  $\frac{3}{8}$ -in. plywood is the minimum required. Wood shingles require nailing strips for application under FHA regulations unless sheathing thickness is at least  $\frac{1}{2}$  in. The foregoing are minimum thicknesses, based on installation of plywood with the face-ply grain direction running across the rafters for small home construction.

Specific recommendations for 20- and 40-lb per sq ft roof loads are as shown in tabulation at bottom of page:

### Recommended Thickness for Plyscord Roof Sheathing

Roof Load, lb/sq ft	Rafter Spacing, in.	Sheathing Thickness, in.
20	23	5/16
	27	3/8
	34	1/2
	43	5/8
40	18	5/16
	22	3/8
	27	1/2
	34	5/8

Based on deflection of 1/360 span with plywood continuous over two or more spans. Face ply grain direction running across the rafters.

Nailing recommendations are similar to those for wall sheathing except that 8d nails are used with panels  $\frac{5}{8}$ -in. thick. A detail of importance in the application of Plyscord sheathing is to protect panel edges from the weather

along cornices and in similar exposed locations. This may be accomplished by means of flashing or by a strip of lumber or exterior type plywood.

**Subflooring.** The Plyscord grade of plywood is an ideal subflooring material providing a tight level surface for the application of finish flooring and serving with particular effectiveness as a horizontal diaphragm contributing to the rigidity of the structure under wind and earthquake loads.

The  $\frac{1}{2}$ -in. and  $\frac{5}{8}$ -in. thicknesses are most commonly used as subflooring. A  $\frac{1}{2}$ -in. panel will support a floor load of 100 lb per sq ft with a deflection of only  $\frac{1}{360}$  of span when laid with the grain of the face plies across joists spaced on 20-in. centers.

Actually a  $\frac{5}{16}$ - or  $\frac{3}{8}$ -in. Plyscord sub-

Plypanel or Plybase grades is recommended as a base over the subfloor for linoleum and composition floor coverings. These grades are also sometimes used as a combination subfloor and underlayment in thicknesses of  $\frac{1}{2}$  to  $\frac{3}{4}$  in. The unsanded Plyscord grade is not adapted to this application.

### Exterior Uses of Plywood

**Siding.** The Plyshield grade of exterior type plywood is designed for this and similar exacting types of service. In most construction, panels  $\frac{3}{8}$ -in. thick are employed over studs on 16-in. centers, although  $\frac{1}{4}$ -in. panels are sometimes used over sheathing. Thicknesses of  $\frac{1}{2}$  in. or more are also used, often in single wall construction, to meet the specific needs of special structures.

A number of methods of treating the joints between panels used for siding are suggested in Fig 2. Both vertical and horizontal joints are shown including such treatments as "v," butt, and shiplap machined joints, as well as joints involving batten strips, metal flashing, and a wood watertable. In any case all edges of plywood siding should be sealed with a thick paste of oil and lead or other suitable material. A satisfactory sealer for this purpose may be prepared from 100 lb of paste white lead,  $1\frac{3}{4}$  gal. raw linseed oil, and 1 pt. of dryer. The proportion of dryer is reduced if boiled linseed oil is used instead of raw oil. The paste is applied at the time of installation of the plywood.

When exterior plywood is installed as lapped siding, the overlap of panels

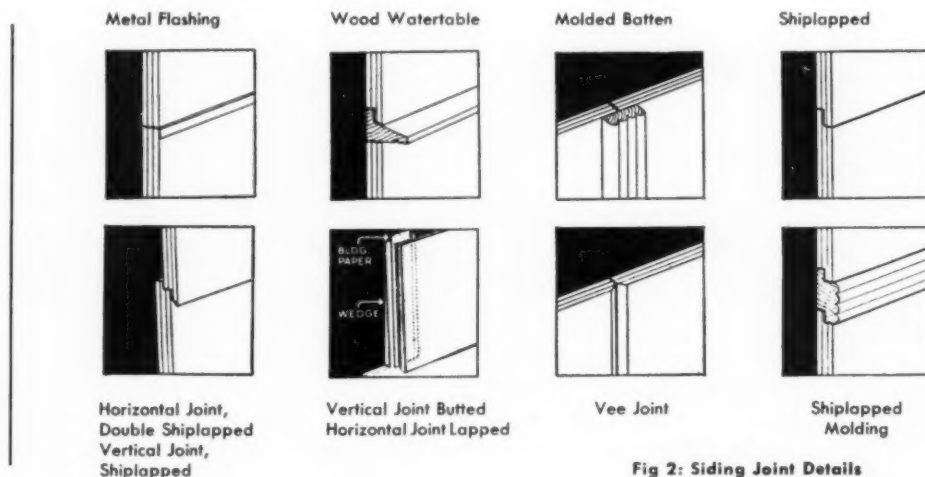


Fig 2: Siding Joint Details

floor is adequate from the standpoint of deflection when laid over joists on 16-in. centers and used with  $2\frac{5}{32}$ -in. wood finish flooring. In this event, however, care must be taken to nail the finish floor to the joists.

When finish flooring is non-structural or wood strip of less than  $2\frac{5}{32}$ -in. thickness, FHA requirements call for  $\frac{1}{2}$ -in. thick plywood subflooring for 16-in. joist spacing,  $\frac{5}{8}$ -in. plywood for 20-in. spacing, and  $\frac{3}{4}$ -in. plywood for 24-in. spacing, with blocking installed at all panel edges perpendicular to the joists.

The nailing pattern commonly recommended is a 6-in. spacing at all panel edges and 12-in. spacing at all other bearing surfaces. Sixpenny common nails are used with  $\frac{5}{16}$ ,  $\frac{3}{8}$ , and  $\frac{1}{2}$ -in. Plyscord and 8d common nails with the  $\frac{5}{8}$ -in. thickness.

Three-eighths inch plywood of the

Panels may be used full size and applied either horizontally or vertically to obtain desirable architectural effects or they may be ripped to half-panel or third-panel widths and installed as wide siding.

When full size panels 4 by 8 ft or larger are used, nails should be spaced not more than 6 in. apart at the panel edges and 12 in. at intermediate bearings. When narrow strips (12-24 in.) are used as lapped siding, nail spacing at the ends of the panels should not exceed 4 in. Sixpenny box nails (hot-dipped galvanized) should be used with siding of  $\frac{1}{4}$ - or  $\frac{3}{8}$ -in. thickness and 8d nails for thicker plywood.

As in the case of any plywood-covered frame, maximum effectiveness is realized when Plyshield panels are glued directly to the framework permitting design based on stressed-skin principles.

should be at least  $1\frac{1}{2}$  in. with paste sealer knifed on the lapped edge. The use of asphalt-impregnated building paper as flashing under the vertical butt joint of lapped siding is illustrated in the diagram. A slight bevel of exposed horizontal edges of the panels in this application is also good practice so that water may drip from the outside edge.

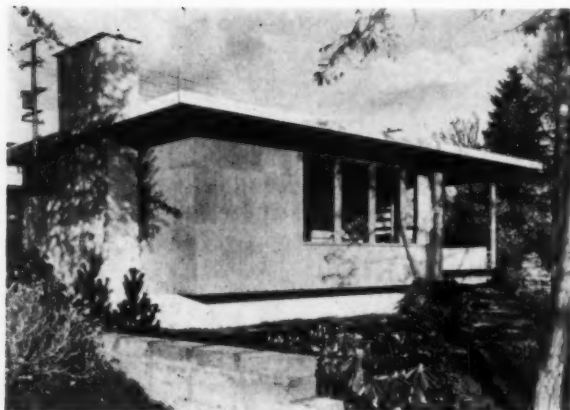
The finishing of plywood for exterior service is not essentially different than the finishing of other wood for similar conditions of use. It is highly desirable that plywood should be given a prime coat immediately after installation. High grade exterior house paints of white lead and oil or of titanium-lead-zinc formulation are well adapted to this use. Paints that form a hard brittle film are undesirable.

A satisfactory prime coat is obtained by thinning a quality exterior paint

## STRUCTURAL PLYWOOD

2

All photos Douglas Fir Plywood Assn.



Richards Studio

3



Exposed plywood exteriors find their way into commercial buildings as well as houses, witness these photos: (1) A combination of flat and curved plywood surfaces form the exterior skin for this small office building by Richard Neutra. (2) Small house by Paul Thiry with flush plywood covering. (3) Long length, scarf-jointed panels were set into the exterior framing members for this Information Center in Portland, Ore., which was designed by John Yeon

primer at the rate of one pint of raw linseed oil per gallon. An alternative is an aluminum base primer compounded from  $1\frac{3}{4}$  lb of aluminum paste in 1 gal of long oil spar varnish. Two coats of paint should be applied over the primer as recommended by the paint manufacturer. In unusually damp situations plywood panels should also be back primed prior to their application in the structure.

**Concrete Forms.** As previously indicated there are two principal types of plywood concrete form material. The most widely used is the Plyform grade of interior type plywood. Although obviously not intended for permanent outdoor exposure, this type of panel with reasonable care has given an excellent account of itself with a dozen or more re-uses. When a greater number of re-uses than this is desired, the B-B grade of Plyform or exterior plywood should be employed. Both of these smoothly sanded grades are adapted to all but the most exacting requirements for concrete construction from the standpoint

of blemish-free concrete. Where special architectural effects require a still smoother finish, the A-A grade of interior or exterior plywood should be used rather than either of the regular concrete form grades. An alternative solution would be to employ plywood made with resin-impregnated overlay faces which is now obtainable.

Concrete form panels require support from studs or joists. Specific design recommendations are, of course, precluded

Ply- form Thick- ness	Stud or Joist Spacing	Permissible Deflection Fraction of span	Load lb/sq ft
$\frac{5}{8}$ in.	12	1/270	880
$\frac{3}{4}$ in.	12	1/270	1330
$\frac{3}{4}$ in.	16	1/270	560
$\frac{5}{8}$ in.	12	1/360	660
$\frac{3}{4}$ in.	12	1/360	1000
$\frac{3}{4}$ in.	16	1/360	420

by the variables of height, rate of pour, and other factors that influence the pressures acting on the forms. The above tabulation serves as a guide to the thick-

ness of form panel required. The effects of wetting, period of loading and of continuous beam action have been taken into consideration for panels arranged with the grain of the face plies running across the studs or joists.

Nails for concrete forms should be as small and as few as is practicable.

### Bibliography

1. Trayer, George W. *The Rigidity and Strength of Frame Walls*. Forest Products Laboratory Report R896. 1929.
2. Trayer, George W. *Plywood as a Structural Covering for Frame Walls and Wall Units*. Forest Products Laboratory Report R1025. 1934.
3. Newlin, J. A. *The Designing for Strength of Flat Panels with Stressed Coverings*. Forest Products Laboratory Report R1220. 1940 (rev. 1946).
4. Douglas Fir Plywood. *Commercial Standard CS-45-48*, U. S. Dept. of Commerce, Washington, D. C. 1943.
- Hardwood Plywood. *Commercial Standard CS-35-49*, U. S. Dept. of Commerce, Washington, D. C. 1949.



# RECENT DEVELOPMENTS IN HEATING, AIR CONDITIONING AND PLUMBING

By Nathan N. Wolpert, Associate Editor, Heating and Ventilating

## Part 2 Ventilation and Plumbing

Last month, Part 1 reviewed products, equipment and systems for the heating and air conditioning of all types of buildings. Part 2 concludes the article and covers ventilation, water heaters and coolers, condensation, plastic pipe, controls, incinerators and plumbing equipment.

### Air Filters

The filter which uses electrical means for building up electrostatic charges on metal plates has proved its value in both industry and commerce as a means for removing fine dust particles from the air. Smaller size units have been designed as part of a forced warm air heating system. For persons suffering from hay fever, a **console type electrostatic filter** removes pollen from the room air to make life more bearable for the victims.

A **self-charging electrostatic, washable filter** that does not have to be connected to an electric power source, is made for use in forced warm air and air conditioning systems. The filter is made of a thin polyethylene film shredded into a porous mass which picks up an electrostatic charge to attract and retain fine dust, smoke or soot when exposed to the air.

Another type uses **aluminum wool packed in a metal frame** with a metal retaining mesh. Fibers are triangular in cross section and have microscopic dust catching barbs on all edges.

### Fans and Ventilation

The attic fan is favored by those who, because of expense, do not wish to install central air conditioning or even a window unit for the bedroom.

There are several models which can fit over narrow hallways or can be used in low attics or in kitchen ceilings. The **fan rests on the attic floor** and has a ceiling shutter which opens automatically when the fan is turned on.

A **combined ceiling heater, light, and ventilating fan** has an 1800-w heating element for rooms up to 575 cu ft. As the air rises in the room, it is drawn through the unit, heated, and forced down by the fan. The heating output is 6640 Btu per hr. Three switches, part of a wall plate, control the three functions of the unit.

There is a **ventilator for any double hung window** which in one position will supply all outside air and in another, it will expel foul air and smoke.

Any combination of supply and exhaust can be obtained.

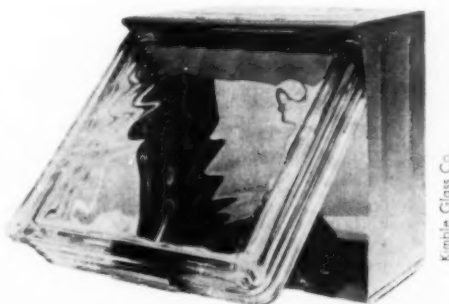
A **reversible two-speed window fan** fits various widths of sash windows and casement windows as well. A stand converts the fan to a portable model. The fan unit can be turned in the frame to make it reversible.

Where a motor is to be placed in a ventilating duct, a **totally enclosed, air cooled unit with flat design** is available in ratings from 1/20- through 5-hp. The frame design of the motor permits mounting by means of ears, drilled and tapped holes in endbells, or by other special means. Either a single phase or polyphase motor can be supplied.

An improvement has been made in the **schoolroom ventilator**. Instead of standing out as a conspicuous cabinet below the window, it can be obtained with metal shelves on either side so that a wall-to-wall installation of even line results. An interesting note in passing is that schoolroom ventilators are now available with **germicidal lamps** for destroying air-borne bacteria.

For **glass block panel walls**, there is a half block panel, which matches the pattern of the glass and swings out for

Right: ventilator for glass block panel walls adjusts to desired opening. Below, left: unit ventilator comes with matching book shelves. Below, right: two-speed, reversible fan fits casement or sash windows; can be removed for portable use

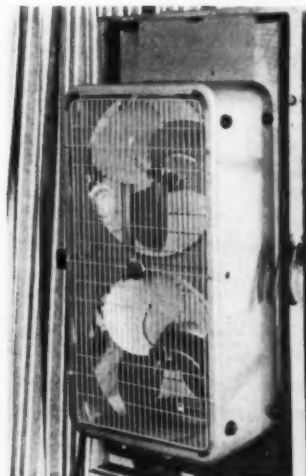


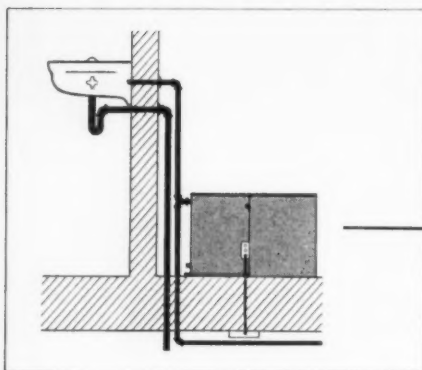
Kimble Glass Co.

American Air Filter Co., Ithman Nelson Div.



Schwitzer-Cummins Co.





Temprite Products Corp.



Remote-type drinking water cooler comes with the cooler, storage tank, compressor and condenser on a single base. Largest model (1/3 hp) measures only 35 by 14 by 16 in.

ventilation. A stainless steel handle, which operates from the inside, opens the ventilator or closes it tightly against a gasket in the frame. An inside aluminum screen keeps out insects.

### Water Heaters and Coolers

Increased use of automatic laundry units and dishwashers in the home has emphasized the need for a **hot water heater** that will supply 180 F water for these machines and 125 F water for household faucets. An **automatic gas water heater** has been designed to supply hot water of two different temperatures from a single tank. A separate line of high temperature water is run to the washers and a second source of water is blended to give a temperature of 125 F. The unit has a special burner for fast recovery and a low turbulence cold water injector.

An **oil-fired water heater for apartment houses** can raise 550 gal., 80 deg per hr. The unit has a storage capacity of 100 gal. and an oil burner firing rate of 3 gal. per hr. The burner can use No. 1, 2, or 3 oil.

**Automatic electric auxiliary heaters** have been designed for domestic and larger applications. The heating element is thermostatically controlled and is rated from 1000- to 7500-w.

For the small commercial building, a **remote type water cooler** can supply 50 F water through wall fountains. An air cooled model will supply 12.1 gal. per hr of drinking water where the inlet temperature is 70 F and the room temperature is 80 F; a water cooled model will supply 12 gph under similar conditions.

A **remote type drinking water cooler** comes with the cooler and storage tank, compressor and condenser mounted on a single base. Because of small space requirements, it is ideal for a number of applications.

### Glass

**Heat-absorbing glass** appears to be an item of the moment, as a means of reducing solar heat gain. The glass,

which has a greenish tint, absorbs the red portion of the solar spectrum, reduces fading of upholstery and drapes, and reduces eyestrain.

Glass of this type is also being used as part of a two-pane window. Such glass is used for the outer pane and conventional glass for the inner one, a hermetically sealed air space between.

### Condensation

New designs in housing, with emphasis on insulation, weather stripping and automatic heating equipment, have introduced new problems in the form of condensation and moisture. Research at the University of Minnesota has included investigations of vapor movement through both small and full-scale building structures as well as many different types of common building materials.

To prevent the blistering and peeling of paint as the result of moisture working out to the outside wall, a **small vent tube**, 2-in. long and 3-in. diam, is inserted from the outside of the house to relieve air pressure and to allow air circulation. The tube is made from a non-rusting alloy and has a dome with a small slot.

**Insulation prevents condensation on cold waterpipes.** It consists of a backing of waterproof, vapor-proof material and a thick insulation blanket. The edges are coated with an adhesive so that they can stick to the pipe.

### Plastic Pipe

Plastic pipe has progressed far from its first introduction into the house field many years ago. One authority states that the use of plastic pipe has expanded from 25 million ft in 1951 to 75 million ft in 1952.

Similar to copper tube, its use does away with many pipe fittings normally required with rigid pipe. Plastic pipe is not subject to corrosion and it will safely carry liquids that will attack either copper or ferrous pipe.

Several new forms of plastic pipe are now being extruded suitable for use as **heating coils in radiant heating sys-**

**tems** or for service lines to carry water from a street main to a building.

A **translucent polyethylene pipe** can be used to observe flow conditions and liquid levels. For this application, the plastic pipe may replace the more expensive glass pipe. Tubes up to a 1-in. diam are available in coils and pipe up to 2-in. N.P.S. diam are furnished in straight 20-ft lengths.

Another feature is **plastic pipe supplied in color** to conform with some code. A yellow plastic pipe will neither fade nor stain.

### Controls

Considerable progress has been made in the art of controls — not only units automatically operated but those of the manual type as well. For example, use of gas heating at one time presupposed the availability of electric power. Now there are several controls for gas heat that function independently of electricity. This has made it possible for homes away from electric lines to enjoy the benefits of gas heat.

An **automatic gas shut-off valve**, for which electric current is not required, has a precision timing mechanism that can be set for any period up to one hour. At the selected time, gas is shut off and a bell signal is sounded. The device is a self-contained unit that can be set in any position. It is suitable for room heaters, water heaters, and incinerators.

A **gas control valve** provides both modulating and snap action in one valve. One part of this control works automatically from a completely off position to a minimum flame that is preset to give proper ignition of the gas. If the inside condition is such that the minimum heat input is required, the snap valve will cycle between off and minimum so that no additional gas can enter. When additional gas is required, the modulating valve takes over and throttles the gas supply from minimum to full.

Another group includes the **time-delay control**. For use with high-pressure oil burners, a special control valve is placed in the high-pressure line be-

tween the pump and oil nozzle. After the burner starts, there is a 6- to 8-second delay before the valve opens to permit the fan to come up to speed in advance of the oil discharged at the nozzle. This avoids development of starting odors.

A control for hot water heating systems with mechanical operation anticipates changes in outdoor temperature and wind velocity before they are reflected in indoor temperature. It consists of a control regulator and a control valve. The regulator extends through the building wall, exposed to wind and weather. A flow of hot water circulates through the indoor end of the unit. The rate at which this heat is dissipated at the outdoor end determines the operation of the comfort control. For large buildings, the heating system may be divided into zones, each with its own comfort control system.

An automatically operated large-capacity mixing valve can deliver 180 F water in one service and 125 F water in another. It is operated by a thermostatic solid-fill bellows mounted in a protected chamber out of the water. Temperature changes in the mixing chamber produce hydraulic action in the external thermal element that actuates the valve. The valve automatically compensates for all normal pressure variations. A calibrated dial permits temperature settings from 90 to 180 F.

Hot water heating systems have always been bothered by air in the system which ultimately results in poor heating. One air eliminator is, in effect, a pipe within a pipe. The brass inner tube extends the supply main below the surface of the water in the boiler, preventing air from entering the piping and heating units. Air that collects at the top of the boiler is bled off to the compression tank through the outer casting.

Another approach to this problem is a control that scoops off the liberated air in a hot water heating system. Since the air tends to travel along the upper portion of a horizontal pipe, air bubbles that pass through the device are scooped by a series of baffles. This air passes on to completely fill an expansion tank. When this tank cannot hold any more air, the excess is removed through an air valve without disturbing the operation of the system.

There are new devices for freeing air in a steam or hot water heating system. As steam or water enters the air valve, the moisture swells the discs but these discs will not completely seal until all air has been forced out. The discs then dry, shrink, and are ready for another cycle.

Room temperatures are individually controlled through the use of a thermostatic radiator valve. A simple dial permits any temperature setting desired. This valve can be used in any low-

pressure one-pipe steam system without interfering with existing boiler controls. The valve body is brass and in the unit is a phosphor bronze bellows.

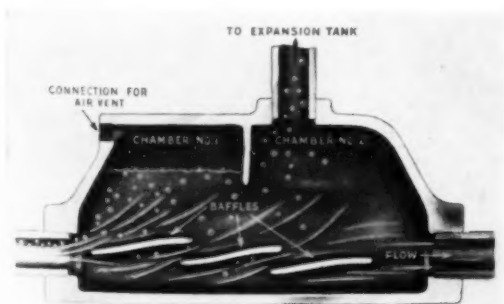
A device with a diameter slightly larger than a 50-cent coin is made to control standing pilots in domestic gas-fired heating appliances.

## Incinerators

Some officials close to the gas industry assert that incinerators installed in homes and housing developments will be an important load for the gas utility. Incinerators are finding increased use in both public housing projects and in many private developments. They eliminate the aggravating practice of collecting refuse at stated times to be hauled away by a public waste collector.

Once considered a basement unit, there are now types designed to fit in with kitchen appliances. This unit can be loaded with either wet or dry trash. A burner control is set so that at the end of the preset burning period, a bell rings and the burning process ceases automatically. The incinerator has an outer shell and an inner shell in which the burning takes place.

For houses with masonry chimneys, the incinerator may be installed at the base of the chimney. The unit has a built-in screen to prevent a spark discharge, a cast iron feed door and grate,



Taco Heaters, Inc.



J. A. Zurn Mfg. Co.

Left: scoop removes air bubbles from hot water heating system by means of baffles  
Right: special carrier supports wall-type kitchen sink and fits behind or within the wall  
Below, left: valve blends hot and cold water to prevent condensation on toilet flush tanks  
Below, right: reinforced plastic bath tub weighs only 17 lb, will not chip or dent



The Paul Products Co.

Strand-Plax Building Products Co.





and an ash door for removing residue.

A **two-part incinerator** dries waste matter in one zone of a divided revolving cylinder and burns it in the other. Refuse, if wet, is placed into the drying zone through a charging door on top of the unit. After pressing the ignition button, the unit functions automatically. Following the drying period, a rotating lever moves the material into the burning zone. It burns both garbage and dry refuse. A burner operates continuously at a rate of 2000 Btu per hr.

### Plumbing

Of great annoyance in the home, particularly in areas where the air may be humid, is the condensation of moisture on the cold walls of a toilet flush tank. There are three interesting methods for correcting this condition.

One device which is basically a **blending valve** connects to both hot and cold water lines to supply water at a temperature that is above the point at which condensation will take place. Only a small amount of hot water is used.

An electrical solution to the condensation problem is an **immersion heater**, thermostatically controlled, that is placed in the tank to raise the temperature of the water.

A **plastic flush tank cover** fits over the entire flush tank to provide a dead air space between the cold surface of the tank and the warm air of the room. This layer of dead air is said to prevent condensation.

Mounted under the toilet seat at the

back of a standard bowl is a **ventilator intake** which is connected with a vent pipe through a wall or roof so that a natural draft draws off odors. The ventilator has the advantages of negligible maintenance and no counter-odor or deodorizing agent to be replenished.

For destroying bathroom or kitchen odors, there is a special **lamp which discharges ultra-violet rays** and which has a rated life of 4000 operating hours.

A **powder for septic tanks** which is flushed into the tank through the toilet increases the biological destruction of fats, proteins or starch components. When treated with the enzymes in this powder, a septic tank is reported operable for 10 to 20 years between cleanings.

Newly installed bathtubs in incomplete bathrooms are often badly scarred by other tradesmen who follow. To protect the tubs from such damage there is a **preshaped cover to fit standard tubs**. The cover is made of sturdy heavy-duty kraft paper that is gummed on the back. To install, a wet cloth is used to moisten the gummed side.

Protection is also provided through the use of a powder that is mixed to form a **paste for brushing on the bathtub surface**. After the tub has been coated with this paste, a layer of newspaper is applied. This is followed by another layer of paste and newspaper until a protective coat is built up of the proper thickness. Warm water and soap are used when one desires to remove the coating.

While in appearance a **reinforced**

**plastic bathtub** resembles a conventional one, it weighs only 17 lb. The tub will not chip or dent even when subjected to a severe impact. Conventional fittings and fixtures are used so that the plumber has no unusual installation problems. The tub has a high gloss and is available in four colors and white and in lengths of 46½, 54 and 60 in.

An **island type kitchen sink** for installation in the center of a kitchen is accessible from all four sides to save steps in kitchen tasks. Two full-size sink wells are set on one side of the top and a drainboard of 816 sq in. covers the other side. A new type faucet can be reached from any side. A flexible spray attachment reaches to any portion of the sink.

To relieve the wall of any load when mounting wall-type plumbing fixtures, a special **chair carrier for drainboard sinks**. The unit has balanced, web-type foot supports, rigid tubular uprights and heavy cast-iron arms. It may be installed behind the wall or within the wall so that only the arms protrude through the finished wall. These supporting arms can be furnished in lengths up to 30 in. and with either lug adapters or screws as a means of supporting the fixture on the arms.

To make it easier to retrieve items which have fallen down lavatory drains, and to prevent stoppage of the drainage system, there is an **interceptor waste trap**.

Activated carbon has long been a means of absorbing odors in industrial plants. The same odor-removing agent is now put up in small containers for use in bathrooms.

### Other Trends and Developments

In several housing projects in New York City, it was found profitable to build the structures around the boilers so that every possible structural interference is avoided. In several projects using low-pressure steam boilers, as many as ten boilers were set in a row, even before the boiler room floor was poured and steel columns erected. There are no concrete forms, stored materials, or anything else to interfere when this plan is followed. Some time ago, a building might be half up before a contract would be awarded for mechanical equipment. Now such contracts are let about the same time as those for the building.

A **dampener** has been designed to reduce the stack losses associated with the on-off type of oil burner systems. It

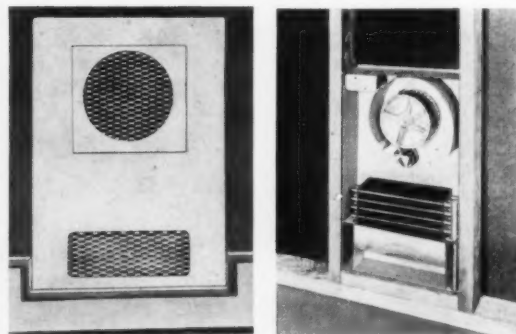
(Continued on page 218)



Remington Arms Co., Inc.

Penn. Boiler and Burner Mfg. Corp.

Left: powder actuated tool which drives studs into concrete or steel can be used to anchor duct and pipe hangers, fasten pipe stanchions in concrete, secure mechanical equipment, etc. Below: individual room radiator for residences and motels has automatic control and comes in 9000 and 18,000 Btu per hr capacities



## PRODUCTS for Better Building

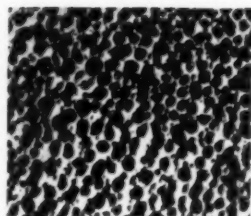
### VERSATILE BUILDING MATERIAL MAKES AMERICAN DEBUT

U. S. architects are currently being given their first introduction to a versatile building material which has already been employed extensively in Sweden and other European countries for 15 years. To be manufactured and marketed here by United States Plywood Corporation under the trade name *Zeprex*, the lightweight mineral material is designed to replace concrete in building super-structures, but it is described as weighing only one-fifth as much as concrete and can be sawed, drilled, nailed or cut with an axe. Self-supporting in lengths up to 18 ft. and more, it is also incombustible, can be worked like wood, and, according to the manufacturer, affords 10 times the insulating quality of concrete, making it suitable for both arctic and tropical temperatures. It will be available in roofing slabs, wall

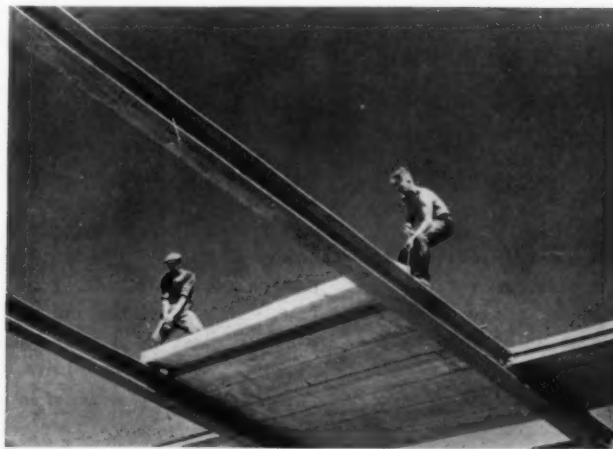
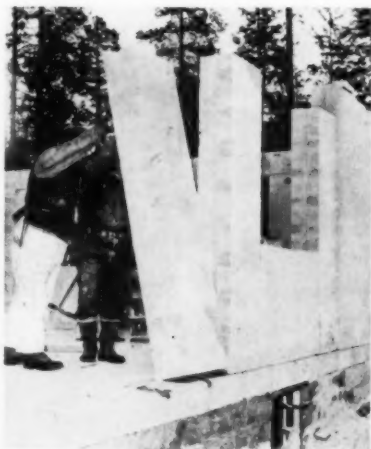
slabs, beams (reinforced with steel rods), insulation slabs and building blocks. Thicknesses can vary from 2 to 10 in., densities vary according to category and use, and the slabs can be made in a variety of shapes.

The material is essentially a siliceous compound of cement, water, mono-calcium silicate and other chemicals, and it has a porous structure which looks like minute honeycombing. It was developed in Sweden in the early 1930's by a civil engineer, Ivar Eklund, and a cement chemist, Prof. Lennart Forsen. First put into commercial production in Sweden in 1934, it has since been produced and used extensively in Germany, France, Poland, Denmark, Norway and Finland. For a short while, it will be imported here to supply requirements of

(Continued on page 210)



Above, right: this warehouse building was constructed with roof slabs of the material. Below, left and right: construction shots illustrate ease of installation, made possible by the light weight of the slabs



# LITERATURE for the Office

## EQUIPMENT FOR COMMERCIAL BUILDINGS

Catalogs featured at right and reviewed below are among current product literature available to architects concerned with the design of commercial buildings such as those presented in ARCHITECTURAL RECORD'S Building Types Study No. 198, pp. 162-186, this issue.



1. *Peg-Board*. This folder gives a brief, clear description — "from shovels to shoes" — of how the manufacturer's perforated hardboard can be used for display purposes. Specifications, wall installation details and over 60 hanging fixtures are outlined, as well as suggestions for finishing and diagrams of the different types of the product. 3 pp., illus. B. B. Butler Mfg. Co., Inc., 3148 Randolph St., Bellwood, Ill.\*

2. *Certified Fire Protection with Remington Rand Vault Doors*. Informative booklet on fire protection of vaults or fire resistant record rooms presents photographs, drawings, complete descriptions and Underwriters' Laboratories' Certifications for each door in the line. Advantages and reasons for choosing either a six, four, two, one, or half-hour door are also cited. 7 pp., illus. Remington Rand, 315 Fourth Ave., New York 10, N. Y.

3. *Gruber Incandescent Lighting*. This catalog features ceiling, wall mounting and pendant units for use in hospitals, schools, institutions and public build-

ings. Several types of safety and thumb screw holders are also included, as well as varied shapes of glass bowls. Photographs and drawings are accompanied by an engineering data sheet in each case, giving specifications and standard finishes. 16 pp., illus. Gruber Brothers, Inc., 125 S. First St., Brooklyn 11, N. Y.

4. *Seaporcel Architectural Porcelain Enamels*. Brochure reviews the manufacturer's line of porcelain enameled metal products, including "Seaporclad" panels for insulated curtain wall construction. Characteristics are given, with some specifications and construction details. More complete detail sheets are available on request. 12 pp., illus. Seaporcel Metals, Inc., 28-25 Borden Ave., Long Island City 1, N. Y.\*

5. *Swivelier, Adjustable Lighting at Its Finest*. Newest catalog from Swivelier emphasizes the many places where swivel and socket lamps can be effectively used, and introduces its "Dextra-Lite," or adjustable industrial unit, which will become available this spring. "Channelites," "Vogue-Lites," "Gyro-

(Continued on page 258)



\*Other product information in Sweet's Architectural File, 1953.



# METAL LATH MEMBRANE FIREPROOFING-7

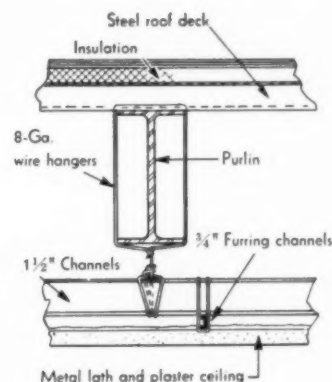
Presented through the Cooperation of Metal Lath Manufacturers' Association

TABLE G—FIREPROOFING FOR METAL ROOF DECKS

Roof	Suspended Ceilings of Metal Lath and Plaster	Fire Resistance Rating	Authority
2" vermiculite concrete	1" gypsum-vermiculite plaster <sup>2</sup>	4-hours	National Bureau of Standards Test No. 60, Report No. TR 10233-2; FP 2688, dated 1/31/49
1" insulation board of shredded wood bonded with Portland cement.	1" gypsum-vermiculite plaster <sup>2</sup>	3-hours	
1" insulation board of felted glass fiber.	1" gypsum-vermiculite plaster <sup>2</sup>	2-hours	
1½" wood fiber-board insulation.	1" gypsum-sanded plaster, 1:2 mix	2-hours	NBS Test No. 58, dated 11/29/46
1½" wood fiber and cement binder.	¾" gypsum-sanded plaster, 1:2 mix	2-hours	NBS Test No. 56, dated 11/27/45
1" wood fiber-board insulation.	¾" gypsum-sanded plaster, 1:2, 1:3 mix	1½-hours	NBS Test No. 57, dated 1/15/46

(2) 100:2½ mix

TYPICAL FIREPROOFING FOR METAL ROOF DECKS



## METAL LATH MEMBRANE FIREPROOFING FOR METAL ROOF DECKS

Ratings listed under cellular steel floors are applicable to steel roof decks, but usually roof decks are covered with insulation instead of

concrete. Tests were conducted at the National Bureau of Standards under the sponsorship of the Metal Roof Deck Institute. These assem-

blies meet the same ASTM standards as are required for floors. Equivalent insulation can be substituted for those listed.

## METAL LATH MEMBRANE FIREPROOFING FOR STEEL PLATE FLOORS

These ratings apply to steel plate floors or roofs on which finished flooring or covering is applied directly, and to the supporting steel beams and joists if they are not stressed beyond 20,000 psi in flexure.

Ratings by the National Bureau of Standards are based on tests in which the metal lath was located within an inch or two or in contact with the lower flange of the supporting steel beams.

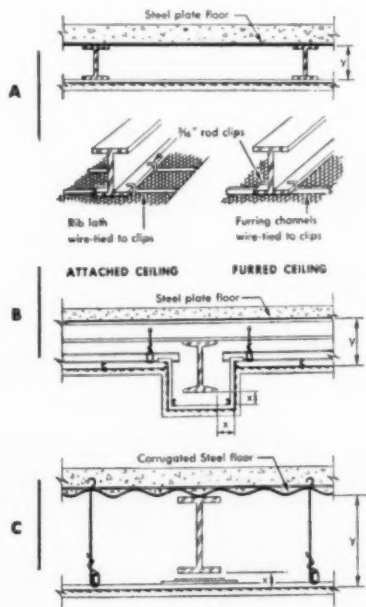
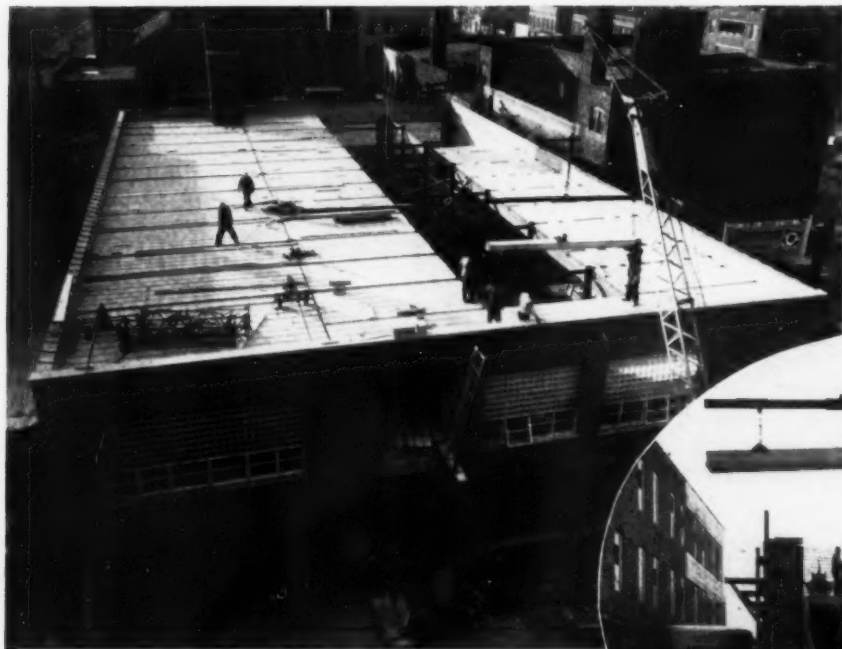


TABLE H. FIREPROOFING FOR STEEL PLATE FLOORS

Floor	Attached, Furred or Suspended Ceiling	Fire Resistance Rating	Authority
2½" 1:2:4 concrete (sketch A)	1" gypsum-vermiculite plaster 100:2, 100:3 mix Y = 3" min.	4-hours	National Bureau of Standards BMS-92, Table 44
2½" 1:2:4 concrete (sketch A)	¾" gypsum-vermiculite plaster 100:2, 100:3, mix, or 1" neat wood-fibered gypsum plaster. Y = 3" min.	3-hours	
2½" 1:2:4 concrete (sketch A)	1" gypsum-sanded plaster, 1:2 mix Y = 3" min.	2½-hours	
2" 1:2:4 concrete (sketch A)	¾" gypsum-sanded plaster 1:2, 1:3 mix, or 1" Portland cement plaster 1:2, 1:2½ mix with 10 lbs. hydrated lime added for each bag of cement Y = 3" min.	2-hours	National Bureau of Standards TRBM-44, Table 22
1½" 1:2:4 concrete (sketch A)	¾" gypsum-sanded plaster, 1:2, 1:3 mix Y = 3" min.	1½-hours	
¾" wood floor and wood screeds over asbestos paper weighing 14 lbs./100 sq. ft. cemented to steel deck with waterproof linoleum cement (sketch A)	¾" gypsum-sanded plaster, 1:2, 1:3 mix Y = 3" min.	1-hour Combustible	
1" concrete (sketch A)	¾" gypsum-sanded plaster, 1:2, 1:3 mix Y = 3" min.	1-hour	Underwriters' Laboratories Retardant 2773, dated 9/12/44
2" reinforced vermiculite concrete (sketch B)	1" gypsum-vermiculite plaster 100:2, 100:3 mix X = 2½" Y = 7"	4-hours	
3¼" concrete (minimum thickness over steel floor) (sketch C)	1" gypsum-vermiculite plaster, 100:2, 100:3 mix X = 2½" Y = 14½"	4-hours	Underwriters' Laboratories Retardant

# TO BUILD ECONOMICALLY • RAPIDLY • ENDURINGLY ...build with *Strestcrete*!



## **RAPID ROLLER COMPANY** Chicago, Illinois

Here STRESTCRETE roof slabs were designed for 125 lbs. per sq. ft. loading—as this same roof will become floor of a future third story.

ADDIS & ASSOCIATES, Architects & Builders  
IRA SALZMAN, Builder



Where permanent, light or heavy duty construction must go up fast and with utmost economy, STRESTCRETE\* pre-assembled, reinforced concrete floor and roof slabs furnish the logical answer.

**STRESTCRETE** floor and roof slabs are fabricated to specifications and delivered to the job in sequence. Their dimensional accuracy permits them to be quickly positioned by a nominal labor force—only a few of whom need be skilled. In multi-story construction, STRESTCRETE's smooth, straight, machine-cast surface affords both ceiling and floor in one unit. Floors immediately become working areas for following trades. Space-wasting vertical supports are not needed with STRESTCRETE.

**Completely fireproof** and simply maintained, STRESTCRETE can be furnished to support any desired load—at *surprisingly low initial cost.*

• For detailed information—consult the STRESTCRETE Licensee nearest you. Planning assistance if desired.

## **STRESTCRETE Licensees**

- **ADAMS CONCRETE PRODUCTS CO.**  
1418 Ecorse Road, Ypsilanti, Michigan
- **ANCHOR CONCRETE PRODUCTS, INC.**  
Wabash Ave. at 2450 William St., Buffalo 6, New York
- **ATLAS BUILDING PRODUCTS CO.**  
P. O. Box 601, El Paso, Texas
- **BASALT ROCK CO., INC.**  
8th and River Streets, Napa, California
- **CLEVELAND BUILDERS SUPPLY COMPANY**  
1276 West Third Street, Cleveland 13, Ohio
- **ILLINOIS BRICK COMPANY**  
228 North La Salle Street, Chicago 1, Illinois
- **LA BRIQUE DU NORD, LIMITEE**  
Rouyn, Quebec, Canada
- **PLASTICRETE CORPORATION**  
College Highway, Hamden 14, Connecticut
- **ROCKLITE PRODUCTS**  
Ventura Boulevard, Ventura, California

# **STRESTCRETE**

Licensed under U. S. Patent  
\*Trade Mark Reg.

## **FLOOR and ROOF SLABS**

# RADIANT HEATING SYSTEMS FOR HOUSES-23: ELECTRIC SYSTEMS

By William J. McGuinness, Professor of Architecture, Pratt Institute

## Electric Cables in Ceiling or Floor (Continued)

### Inspection and Tests

When the heating wires are in place and fastened but not covered and when all other wiring is installed and not closed an inspection should be called for. An ohm-meter or megger is used for checking possible damage to insulation. A lamp in series with the heating element will flicker or go out to indicate a severed heating wire. Tests should be made both before and after plastering or concreting. If trouble is found at either time, broken wires can have repair splices applied and damaged insulation can be reinforced by thermoplastic tape.

### Design Procedure

1. Compute hourly heat losses in each room without regard to the planned location of the panels. Losses should include heat flow through floors, ceilings, walls, perimeter and glass. Infiltration must be included.
2. Divide the hourly heat loss from each room in Btu per hr by the factor of 3.14 to obtain the required wattage of units to be selected for the room.
3. Select from Table 8 sheet 21 TSS, March 1953, one or more standard heating units for each room. Their total rated wattage must equal the wattage required in the room.
4. Make a layout of the placing of these units, maintaining a minimum spacing of 1½ in. for ceilings and 2½ in. for floors.
5. Select locations for room thermostats where they will not be too directly affected by sunlight, draughts or the action of heating panels.
6. Make a layout of the connections from rooms to the load center and size all wiring.
7. Design the load center and show its connection to other general house wiring for lighting, etc., and to the house switch.

### Spacing and Output of Cables

If a coil of heating wire is distributed uniformly over the entire ceiling (or floor) and if one unit is

used, the spacing between wires may be established by the formula

$$S = \frac{12 \times (W-1) \times (L-1)}{C}$$

where: S = spacing in inches between turns

W = width of the room in ft

L = length of the room in ft

C = length of the coil in ft

This is based on a space of 6 in. between wire and walls which should be observed. In the case of rooms with great heat loss it is well to consider the maximum possible output of ceiling and floor panels. For ceilings the recommended minimum spacing of 1½ in. between wires gives the following output in Btu per hr per sq ft of panel:

$$\frac{12''}{1.5''} \times 2.75 \times 3.14 = 69.5 \text{ Btu per hr per sq ft}$$

NOTE: 2.75 is the number of watts per ft of length for all cables  
3.14 is the number of Btu per

hr equal to 1 watt

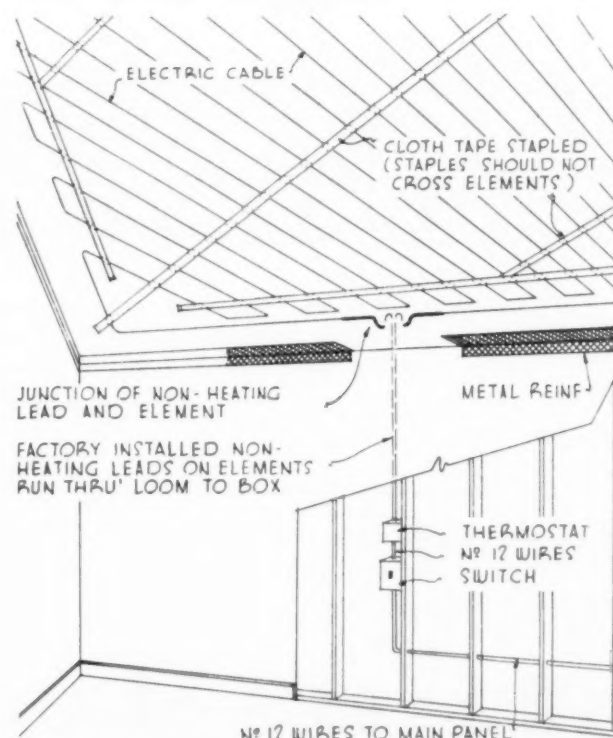
For floors the recommended minimum spacing is 2½ in. and gives an output of:

$$\frac{12''}{2.5''} \times 2.75 \times 3.14 = 41.5 \text{ Btu per hr per sq ft}$$

Reference to Table I, Sheet 4 of TSS, August 1951, will recall the recommended maximum outputs of 75 and 55 Btu per hr per sq ft for ceilings and floors respectively. It will be seen that the maximum outputs that are achieved by the minimum spacing of wires in electrical systems are within these limits.

The heating wires operate at about 165 F and therefore do not subject the plaster to a general average temperature of more than 150 F, which is the practical limit for plaster. If the suggested minimum spacing limits are observed, surface temperature of ceilings will not exceed 115 F and floors 85 F—which are often considered the high limits for comfort.

### Variation in typical cable layout





**You can recommend them with confidence**

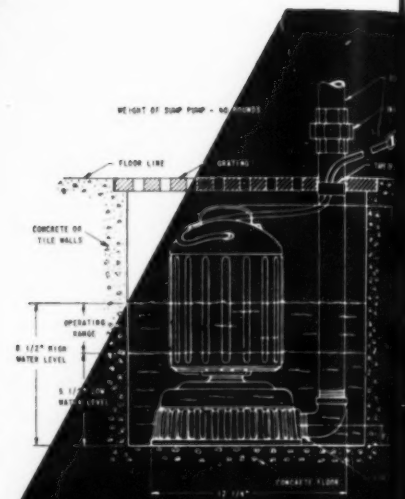
## **FAIRBANKS-MORSE**

### **NEW Submersible Cellar Drainer**



You and your clients can be sure of ample, dependable protection against damage in basements by flooding if you have this *new* Fairbanks-Morse submersible cellar drainer installed!

It has many advantages. It can be concealed in a sump only 16" x 16" x 16". (See diagram). It will discharge as much as 3600 gph. against a 10-foot head. The big screen area permits only trash-free water to reach the impeller. Operating range is set at the factory. Thus, no float adjustment is necessary. Motor and operating switch are enclosed in a water-tight stainless steel housing which also serves as a float control.



## **FAIRBANKS-MORSE**

### **DEEP WELL SUBMERSIBLE PUMP**

Architects, builders and drillers in all parts of the country are recommending the sensational Fairbanks-Morse submersible pump. It features complete submersion of *motor and pump*; absolutely quiet operation; ease of installation; minimum maintenance; single instead of double lengths of pipe; and a range of capacities at depths to 140 feet to meet all requirements.

#### **Send for Specifications**

If you do not have complete specifications of the deep well submersible pump and the submersible cellar drainer in your files, ask to have them sent at once. Address, Fairbanks, Morse & Co., Chicago 5, Illinois.



## **FAIRBANKS-MORSE**

*a name worth remembering when you want the best*



# STRUCTURAL FORMS-18: THIN SHELLS OF REINFORCED CONCRETE

By Seymour Howard, Architect, Instructor at Pratt Institute

## A-1 Center(s) of Curvature below Shell (Continued)

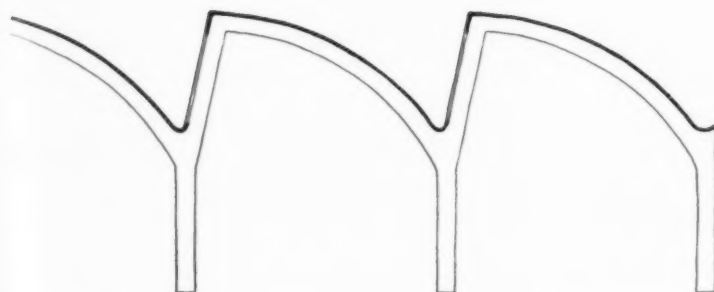


NOTE: For short barrels the curve is based on the arches and follows the pressure line for them, normally close to a parabola or catenary. The catenary would lie between the parabola and the circular segment.

## Some Typical Cross Section Curves

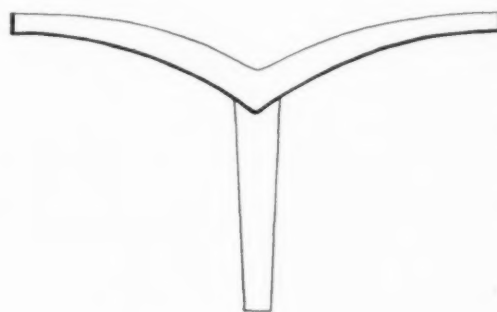
The parabola is as flat a curve as should be used. The vertical tangents at the bottom edges of the ellipse (or approximations by using two or three arcs) and of a shell with edge beams reduce or eliminate crown moments. It is not practical to place concrete at angles steeper than  $45^\circ$  without top forms; therefore job economy favors flatter curves. This requirement would limit depth to width ratio to 1 to 5 with circular arc. Cycloid has been used because of vertical tangent at bottom edges, but requires a depth to width ratio of 1 to  $\pi$  or 0.318 to 1.

Natural lighting can be provided by circular holes cut in shell, 3 ft-0 in. to 4 ft-0 in. diameter, or by glass prisms cast directly with the concrete



## Typical "North Light" Shells

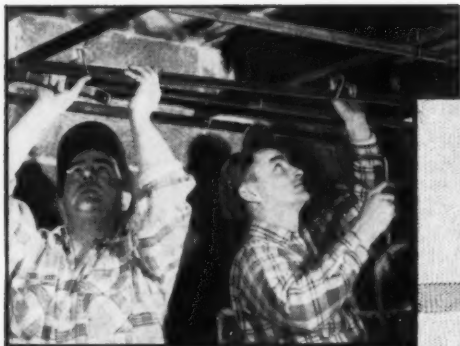
Note that, although these can be continuous, they cannot be multiple.



## "Butterfly" Shell (Twin Cantilever)

Can be used as shown for train or bus platforms; also grouped in pairs with skylight between and occasional ties to eliminate need for wide, rigid footings.

# IN KENTUCKY'S NEW



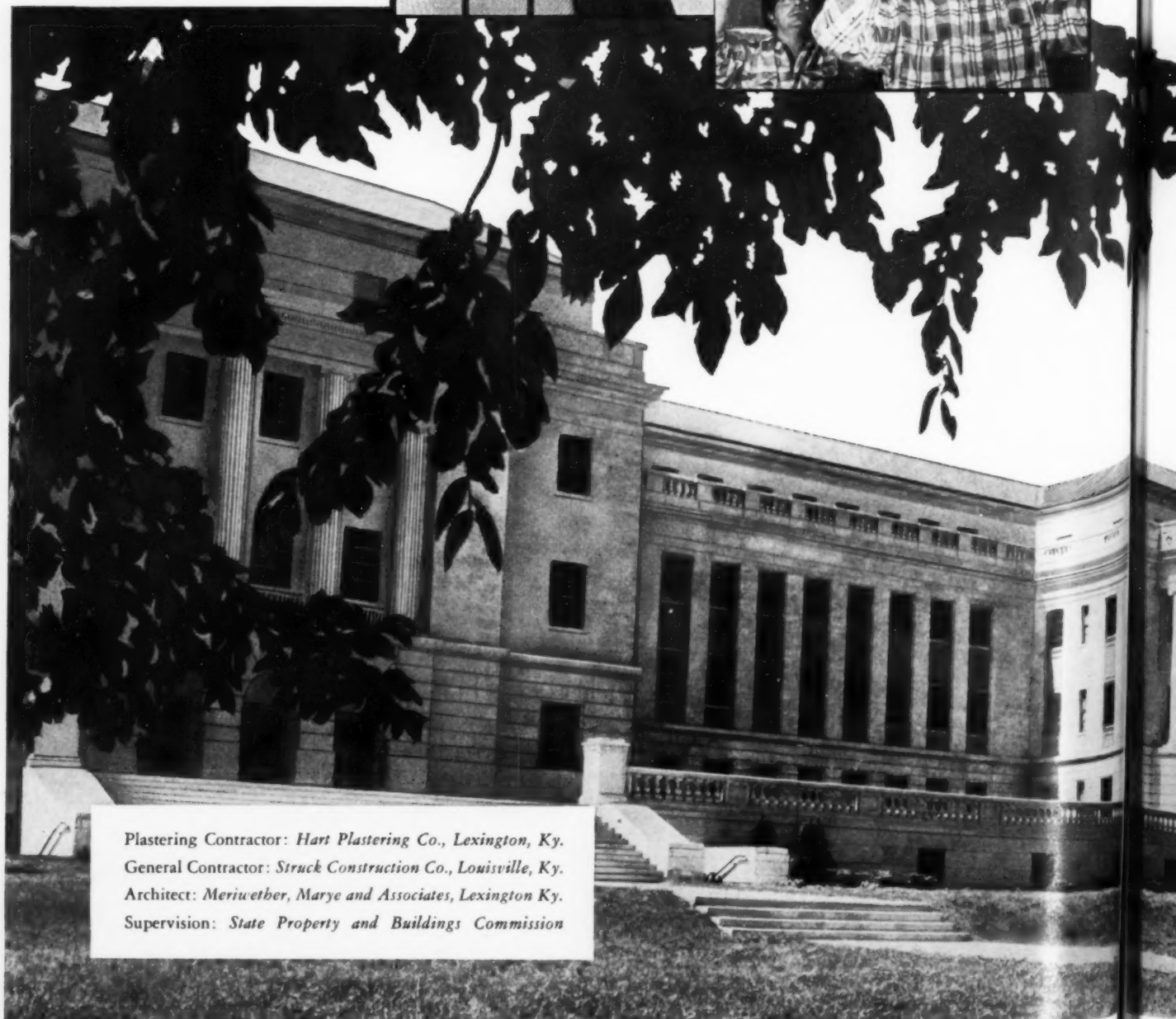
*Wheeling Channels  
go up quickly, easily.*



*Wheeling Metal Lath  
ties flat, stays rigid.*



*Attaches to form  
a firm, sturdy surface.*



Plastering Contractor: *Hart Plastering Co., Lexington, Ky.*  
General Contractor: *Struck Construction Co., Louisville, Ky.*  
Architect: *Meriwether, Marye and Associates, Lexington Ky.*  
Supervision: *State Property and Buildings Commission*



# V CAPITOL ANNEX . . .

## —it's *WHEELING* *Channels and Metal Lath!*

*Kentucky's new Capitol Annex Office Building* in Frankfort successfully combines classic beauty with modern functionalism, yet retains the prime advantages of each. Patterned in style after its "sister" building, the State Capitol, the new Capitol Annex provides needed office quarters for the various State Government agencies.

*To give a firm foundation to all plastered surfaces*, and still allow for maximum flexibility of design, the builders used over 100 miles of Wheeling Channels and 50,000 square yards of Wheeling Metal Lath. They were thus assured of sleek, graceful interiors, free from cracks and flaws.

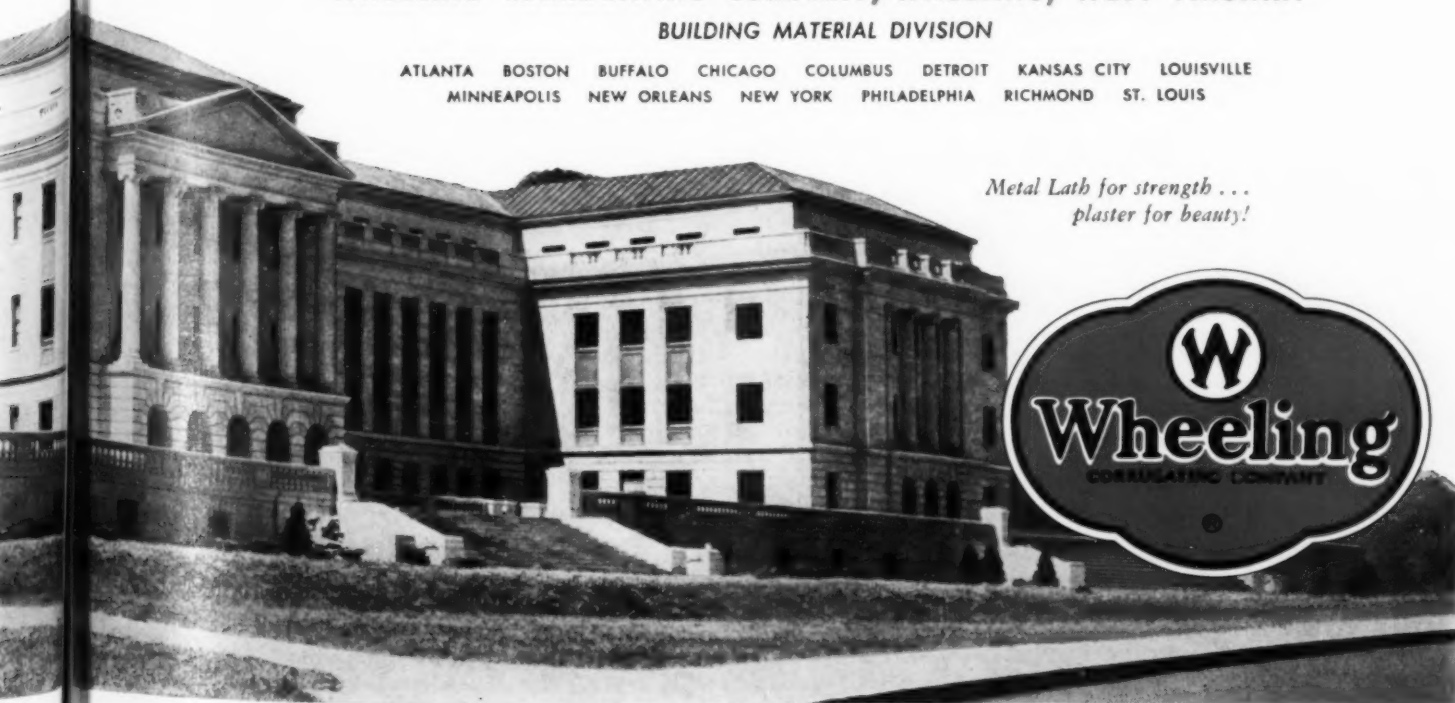
*The Wheeling line of building materials includes:*  
Steelcrete Reinforcing Mesh, Expanded Metal, Metal Lath  
and Metal Lath Accessories, Tri-Rib Steel Roof Deck,  
ExM Angle Frame Partitions, Steelcrete Vault Reinforcing.

### WHEELING CORRUGATING COMPANY, WHEELING, WEST VIRGINIA

#### BUILDING MATERIAL DIVISION

ATLANTA BOSTON BUFFALO CHICAGO COLUMBUS DETROIT KANSAS CITY LOUISVILLE  
MINNEAPOLIS NEW ORLEANS NEW YORK PHILADELPHIA RICHMOND ST. LOUIS

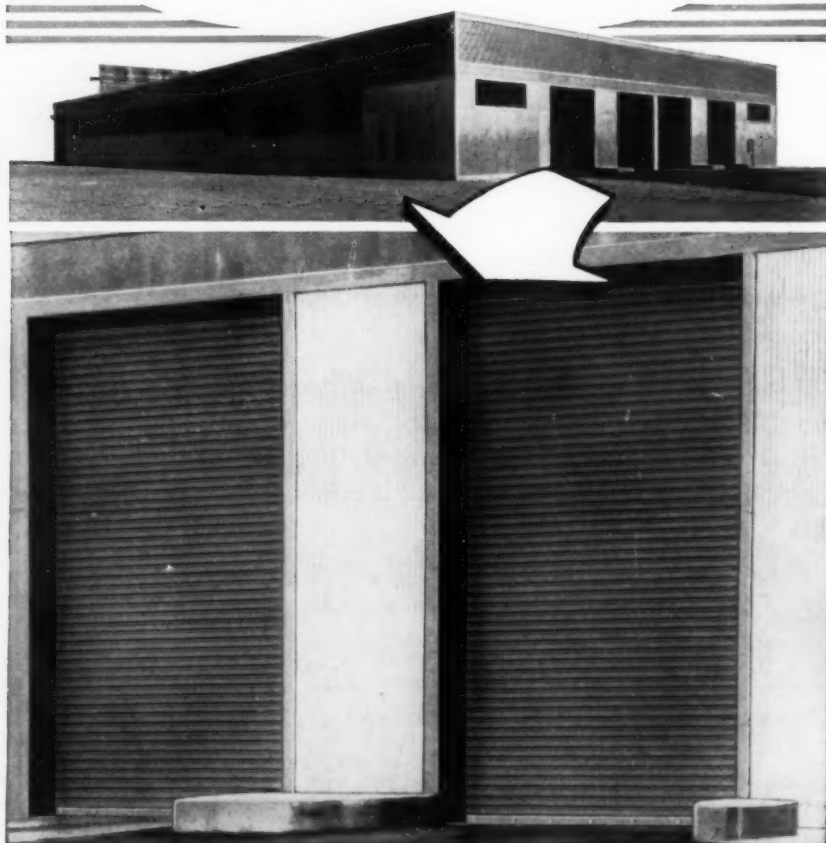
*Metal Lath for strength . . .  
plaster for beauty!*



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*increase efficiency in  
another modern building*



### Ward Steel Co. Pleased with Kinnear Doors

*"We certainly are very pleased that Kinnear Doors were selected . . . we operate five of them, and at all times have experienced the utmost of performance."*

Mr. J. A. Parsons, Vice President  
Ward Steel Co., Cambridge, Mass.

— And in thousands of other buildings, old and new, Kinnear Rolling Doors have proved that they give better service at lower cost. Their efficient *coiling upward* action and protective all-metal interlocking slat construction permit maximum use of

all space around doorways — *inside and outside* the building — always.

Kinnear Rolling Doors open and close with smooth, time-saving ease year after year. They assure extra protection against wind, weather, intrusion, and fire. Available for manual or motor operation. Electrically operated doors can be equipped with control switches at any desired number of locations. Kinnear Steel Rolling Doors are built in any size, for easy installation in old or new buildings. *Write for full details today.*

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ROLLING DOORS

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## Architectural Engineering

### HEATING AND AIR CONDITIONING

*(Continued from page 196)*

can be used with the residential and the small industrial type burner. An automatic shut-off closes down 80 per cent of the equivalent cross sectional flue area and bypasses the draft away from the furnace. During the burning operation, it provides a baffling action which proportions the cross sectional area of the flue pipe with the intake of secondary air. This unit replaces a section of the flue pipe. It is available for six of the standard flue pipe sizes.

**Individual room control of room radiators**, through low-priced automatic means, is of particular interest for both residences and motels. As each room is occupied, the radiator can be adjusted for a comfortable temperature. The radiator is designed to fit standard stud spacing and only four sweat joints are required per radiator. Radiators are available in both 18,000 and 9000 Btu per hr capacities.

A **portable space heater** is suitable for construction work and for drying building products. It burns propane gas and has an output of from 85,000 to 150,000 Btu per hr. The heater can operate from 40 to 43 hrs on a 100 lb tank of gas. The unit measures 31 in. high and weighs 31 lb.

A close-coupled type **horizontal cellar drainer** provides protection for cellars that may be flooded. The pump itself is not in the pit. The motor is not subject to vapor, moisture or fumes from the sump and, if desired, the unit can be set up to 8 ft away from the sump. The pump is free from clogging due to accumulated silt.

Much of the customary labor of making a **combustion analysis** is eliminated by a portable unit. One probe of the instrument is inserted into a small hole in the flue to measure carbon dioxide content and stack temperature. The other probe is inserted in front of the furnace to measure draft over fire. The instrument is vibration and shock-proof and has a glass coated electronic thermistor.

A **powder-driven tool** is used to drive studs into concrete or steel with no outside power other than that supplied by the firing of a gunpowder-loaded cartridge. It can be used for anchoring pipe hangers in concrete, fastening pipe stanchions in concrete, anchoring mechanical equipment and for anchoring laundry fixtures in concrete or steel.

# Onyx

-another Church "FIRST!"



Again Church sets the pace with this beautiful all-molded seat, in striking pastels that will complement any bathroom color scheme . . . *plus* a lovely new wispy, ingrained effect exclusive with "the best seat in the house."



Handsome enough to specify for your finest residential commissions. Sturdy enough for hotel or apartment house installations.

And the price — no more than the cost of a white seat of similar quality — permits inclusion in any budget. Built to Church standards of quality throughout.

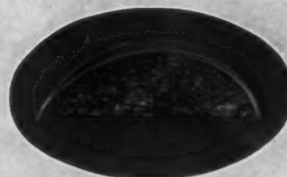
To architects — we will be glad to send on request a cut-out cross section of this handsome and durable seat.

C. F. CHURCH MFG. CO., Holyoke, Mass.

#### No. 900 Onyx Church MOLTEX® Seat

All-molded closed-front seat with cover, for regular bowl

In Dove Gray  
Diana Blue  
Teal Green  
Clover Pink



ONYX Seats have a thick everlasting surface molded over a core of fibrous chips and resins compressed under tons of pressure . . . no grain or joints.

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Serving home and industry: AMERICAN-STANDARD • AMERICAN BLOWER • CHURCH SEATS & WALL TILE • DETROIT CONTROLS • KEWAHNE BOILERS • ROSS HEATER



# THIS GEM OF A FLOOR PLATE OFFERS FIVE POINTS

## Flawless Foot Safety!



Although all floor plates have raised figures, only one—A.W. SUPER-DIAMOND—has the anti-skid precision pattern you see here. Each diamond is placed perpendicularly to its neighbor. This means that every footstep is across the grain—every step is secure.

## Jeweled Surface Service!



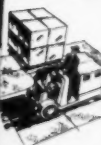
More than forty diamond traction points grip every footstep. Regardless of the angle of approach or the incline of the flooring, A.W. SUPER-DIAMOND holds footsteps fast, offering maximum skid-resistance. Every diamond works against a skid.

## Quality With Savings!



The initial cost of A.W. SUPER-DIAMOND is low—and so is the maintenance. Perfect matching end-to-end and side-by-side in SUPER-DIAMOND permits cutting with a minimum of waste. Cleaning is the only maintenance.

## Tough As A Diamond!



A.W. SUPER-DIAMOND is a steel floor plating that possesses diamond-like hardness and toughness. Years of abuse and hard use won't wear out this rolled floor plate. It withstands hard blows and heavy loads without cracking or breaking—and it's resistant to oil, heat, and fire.

## No Special Cleaning!



Although SUPER-DIAMOND'S exclusive pattern holds footsteps, it doesn't hold dirt. No cracks or joints mean this plating can be cleaned easily with broom, mop, or hose—and it dries fast after washing. If you want, SUPER-DIAMOND can be painted.

For safety with economy in potential accident spots in your factory, get complete information about A.W. SUPER-DIAMOND Rolled Steel Floor Plate. Simply clip and mail this coupon, and we'll be glad to send you technical data and suggestion for use.



## A.W. SUPER-DIAMOND

ROLLED STEEL FLOOR PLATE

## ALAN WOOD STEEL COMPANY

CONSHOHOCKEN, PENNA.

Please send me Booklet SD-59 on A. W. SUPER-DIAMOND

Name \_\_\_\_\_  
Title \_\_\_\_\_  
Company \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

Other products: A. W. ALGRIP Abrasive Rolled Steel Floor Plate • Plates • Sheets • Strip (Alloy and Special Grades).



## Architectural Engineering

### PRODUCTS

(Continued from page 197)

moderate-size building projects, and will be available only in limited quantities until production facilities are established in this country. After American plants are built, however, the material is expected to be readily available both in stock sizes, shapes and densities and in other specifications tailored especially to suit particular requirements of individual jobs.

Here is a brief rundown on uses and advantages of the material as reported by the manufacturer:

- Floor Slabs; density 30 lb per cu ft. Easier to lay than wood flooring. Provide dry floor immediately ready for application of decorative tiles, linoleum, etc. In multi-story installations, underside forms ceiling of level below and can be left undecorated if desired.

- Roofing Slabs; density 30 lb per cu ft. Require a minimum of structural steelwork because of light weight. Usually covered with weather resistant asphalted felt.

- Wall Slabs; density 30 lb per cu ft. Can be easily installed, help lower field labor costs. Outside walls can be covered with any commonly used finishing material. Usually either painted or stuccoed. Inside walls can be left undecorated if desired, can be finished without scratch coat plaster. Panels can also be used for interior partitions.

- Insulation Slabs; density 25 lb per cu ft. For roofs and walls, interior and exterior. Are securely bonded to concrete walls when the concrete is poured.

- Building Blocks; density 30 lb per cu ft. Can be used for load-bearing walls for one and two-story houses. Thicknesses from 2 to 12 in., lengths up to 3 ft. Lightweight, easy to handle, can be mortared together as easily as bricks.

Further advantages cited for the material: Low water absorption (only  $\frac{1}{3}$  as much as brick); low heat conductivity; high insulating value (a 6-in. slab reportedly is equivalent to 6 in. of concrete plus 3-in. insulating board back—*(Continued on page 214)*

## MODULAR CONSTRUCTION

Coordination of modular design and modular brick eliminates cutting around openings, improves appearance, saves from 5%-15% in drafting time, from 8%-21% in on-site costs.

>> Case histories prove that modular-sized brick and tile save time and money for both architect and builder. Says the Department of Education and Research of the American Institute of Architects:

>> *"Architects who regularly use the Modular Method report a 5% to 15% increase in the rate of production of drawings. Two impartial studies showed in-the-wall savings of 8% to 21% due to the use of Modular-Coordinated masonry units."*

# modular brick and tile cut costs on the boards, on the job

The sketches at the right show how modular coordination of materials and design eliminates tedious cutting and fitting of brick and tile around window and door openings.

>> Carrying out its tradition of service to architects, the Structural Clay Products industry was the first to support modular coordination on an industry-wide basis. For full information on modular brick and tile, call your regional SCPI representative or write to our Washington office.

Get these two free booklets for your file on modular design: *"The ABC of Modular Masonry,"*  
*"Modular Sizes of Brick and Tile."* Address AR-5.

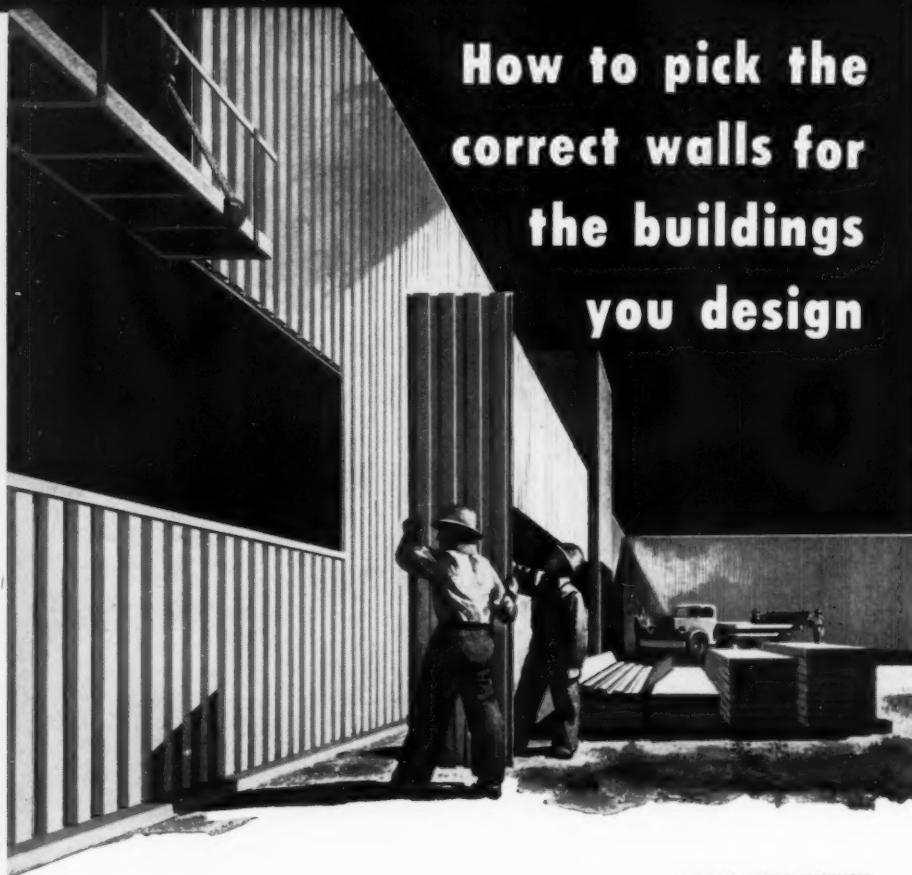
## NON-MODULAR CONSTRUCTION

Lack of coordination between brick sizes and architects' dimensioning requires cutting and fitting to accommodate openings.

**SCPI**  
STRUCTURAL CLAY PRODUCTS INSTITUTE  
WASHINGTON, D.C.

**STRUCTURAL CLAY PRODUCTS INSTITUTE • 1520 18th Street, N. W., Washington 6, D. C.**

# How to pick the correct walls for the buildings you design



If you are designing a building, you can pick the correct wall by matching the function of the structure against the Robertson Q-Wall products shown here. These modern walls save construction time and money and give many extra years of maintenance-free service. They can be demounted and reused to keep pace with plant expansion. Q-Walls weigh less than 1/16th of the equivalent masonry wall.

**1. Galbestos.** Ideal for standard industrial plants. Galbestos has the highest resistance to corrosion and weather of any protected steel siding or roofing you can specify. For mill buildings, warehouses, or any other industrial structures that do not require full insulation.

**2. Insulated Galbestos.** Perfect for a dry-occupancy industrial building that must be heated. Non-combustible insulation is installed on the job by the Robertson *Top-Speed* fastening method, and Galbestos applied over. Its heat transmission factor (U-Value) is 0.16 BTU per sq. ft. per hr. per degree of temperature difference, F.

**3. G-Type Q-Panels.** This is a *field-assembled* wall made up of an interior steel vapor barrier, a layer of incombustible insulation, and an exterior of tough, long-lasting Galbestos. The proper combination for an industrial situation which requires both temperature and humidity control. U-Value—0.16 BTU.

**4. Q-Panels.** A quickly erected, *factory-assembled* panel combining strong, dry, lightweight construction with architectural beauty. Well adapted to air-conditioned buildings of all sizes, and obtainable with various exterior surfaces, either metal coated steel, stainless or aluminum. U-Value—0.16 BTU.

**5. H-Type Q-Panels.** Differ from standard Q-Panels essentially in that they contain twice as much insulation. Ideal for cold storage warehouses, refrigeration plants and structures subjected to Arctic conditions. U-Value is 0.08 BTU. Write for complete details.

## Robertson Q-Walls

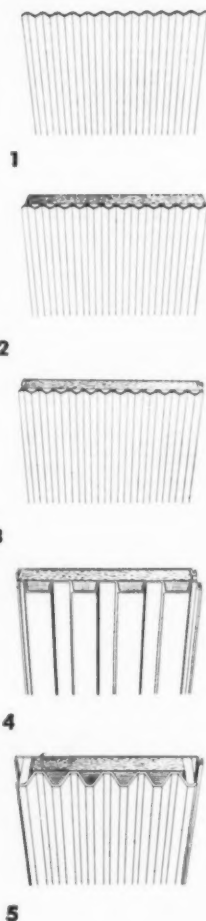
a product of **H. H. Robertson Company**

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Offices in All Principal Cities



World-Wide Building Service



## Architectural Engineering

### PRODUCTS

(Continued from page 210)

ing, or to an 18-in. brick wall); immunity to termites; almost complete freedom from swelling or shrinking; minimization of necessity for waterproofing; minimization of necessity for supplementary surface treatment; favorable competitive prices. United States Plywood Corp., Weldwood Building, 55 W. 44th St., New York 36, N. Y.

### Free Form Furniture

Long recognized for his paintings, drawings, metal sculpture and his experiments in other graphic arts, Harry Bertoia has added furniture design to his repertoire with a new *Knoll* line of formed wire chairs, supported on steel cradles. Each of the various models is covered with a foam rubber seat cover,



Bertoia's wire shell chair has removable foam rubber pads with prefixed upholstery in several colors. Sculpture at right is also by the artist

upholstered in a handsome fabric which is available in six colors. Most of the wire shells are plastic-coated, although they may be obtained with an oxidized finish if desired. A patented pivot-mechanism permits adjustment of the seating angle. Stationary construction is also available, however. The chairs have been designed for either indoor or outdoor use. Knoll Associates, Inc., 575 Madison Ave., New York 22, N. Y.

ARCHITECTURAL RECORD



## Architectural Engineering

### PRODUCTS

#### Rolling Wardrobe Door

The *Barcol Wardrobedoor* has been devised to save space in classrooms and provide additional wall space for bulletin boards or blackboards, which may be applied directly to the surface of the door. The door rolls straight up into the wall and does not stick out into the aisle. This reportedly helps eliminate minor accidents during the cloakroom rush. Both attractive and utilitarian,



Courtesy Donald K. Phillips

Wardrobe door rolls up into wall, operates smoothly, saves space

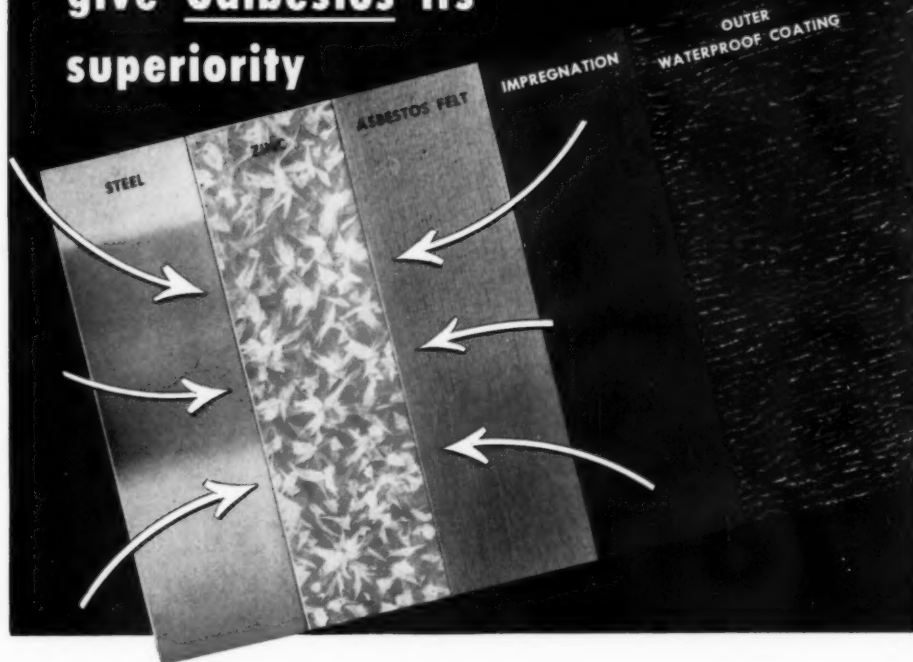
the rolling door has been installed in the Henry Barnard School, New Rochelle, New York, for which Lee Perry was the architect for the remodeling. Construction of the door is two-section Kaylo core made of non-select birch hardwood or rotary red oak. Mounted inside the door frame on 2 by 8 casing, the door has nylon rollers which provide a smooth, quiet operation. It requires 3-ft 6-in. headroom and 9-in. sideroom, and is made in two standard sizes, 12 by 6-ft and 10 by 6-ft, accommodating coats for 48 and 40 students respectively. Barber-Colman Co., Rockford, Ill.

#### Insulation for Transformers

A new insulating material, *Mylar* Polyester film, is now being used in the transformer field. The material, combined with Johns-Manville Quinterra and DuPont Dacron is used in *Marcus* transformers on Class B insulated magnet wire. It is claimed that the new

(Continued on page 218)

## How molten metal helps give Galbestos its superiority



Robertson Galbestos has the greatest resistance to weather and corrosion of any protected steel roofing or siding obtainable anywhere. This position of broad superiority is made possible by a unique manufacturing process exclusive with H. H. Robertson Company.

First, the steel sheet is pickled . . . then given a coating of molten zinc. Asbestos felt is then pressed on so that as the molten metal hardens in cooling it grips the felt fibers in absolute bond. The asbestos is then impregnated with a special asphaltic compound and, finally, given a tough weatherproof coating. Galbestos can be furnished flat or in the 3 well-known corrugations: Standard, Mansard, and V-Beam. The resultant material is so durable, it may be sheared, bent, rolled, crimped and riveted in the field as easily as ordinary unprotected steel. It will withstand the greatest possible extremes in weather temperatures without deterioration, and will actually retard fire better than naked steel. For an industrial roofing or siding that requires no maintenance under the most severe corrosive conditions, specify Galbestos.

**Long Service Life.** Galbestos will give longer maintenance-free service under the most severe weather and man-made corrosive conditions. Even salt air cannot penetrate its tough coatings to destroy the steel core.

**Not Fragile.** Galbestos' strong steel core sheet guarantees against breakage—during shipment or during erection.

**Resists Climatic Extremes.** Galbestos is not subject to damage either by tropic or frigid temperatures. Its coatings will not run under broiling sun or crack or spall in sub-zero weather.

**Goes Up Fast.** The exclusive Robertson *Top-Speed* method of attaching Galbestos to structural steel speeds up erection for quicker occupancy.

**Resists Flame.** Leading testing laboratories have made exhaustive tests on the fire resistance of Galbestos and have published the results. Copies of these reports are available for study.

# Robertson Galbestos

a product of **H. H. Robertson Company**

2404 Farmers Bank Building • Pittsburgh 22, Pa.

In Canada:

Robertson-Irwin Ltd., Hamilton, Ontario



In England:

Robertson Thain Ltd., Ellesmere Port, Cheshire


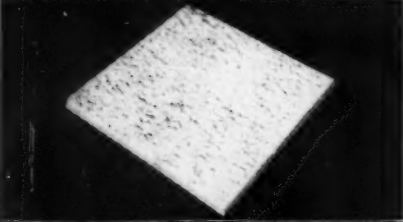
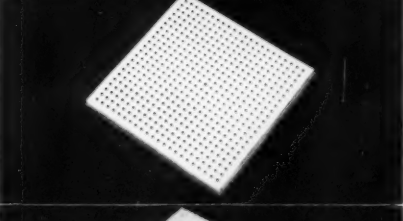
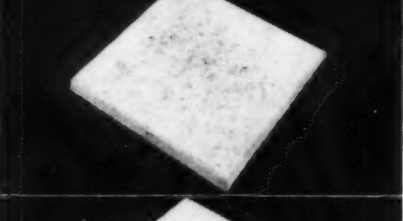
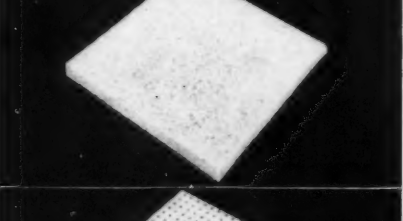
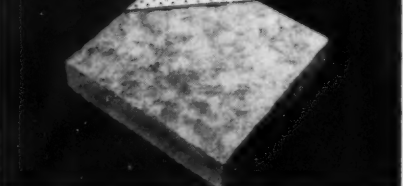


# The only **COMPLETE** acoustical line!

THERE'S a Gold Bond acoustical product to meet every sound-conditioning need, and fit every budget. Your local Gold Bond Acoustical Contractor will be glad to show you these materials, and give you more facts about them. You'll find him listed in the yellow pages of your phone directory under "Acoustical Contractors." He's factory-

trained and his acoustical engineering service is at your disposal. Without obligation, he will work with you to select the right product for the job. For additional information on the complete Gold Bond line, see our section in Sweet's or write Architect Service Dept., National Gypsum Company, Buffalo 2, New York.

America is  
sound conditioning  
with **Gold Bond**

		Noise Reduction Coeff.	Thickness	Sizes	Finish
	<b>ACOUSTIMETAL</b> Low maintenance cost. Can be washed or painted any number of times. Panels quickly removed for access to plumbing and wiring. Incombustible, permanent, salvageable. High acoustical efficiency.	.85	1 3/16"	12" x 24"	Alkyd resin enamel finish. Baked on by infra-red light. Bonding of metal assures greater adhesion of paint.
	<b>TRAVACOUSTIC</b> Beautiful mineral tile resembling natural travertine stone. Fissures vary in size, depth and arrangement. Incombustible, sanitary, acoustically efficient. Resistant to mold and vermin.	.65 .70 .70	1 1/16" 1 3/16" 3/8"	6" x 12" 12" x 12" 12" x 24"	Non-glaring white finish applied at the factory gives high light-reflection. Repaintable with brush or spray gun.
	<b>ACOUSTIFIBRE</b> Repaintable wood fibre tile. Einzel-drilled for round, clean holes deep into porous core. Finish resistant to mould and fungus. Sanitary, washable.	.55 .65 .70	1/2" 3/8" 3/4"	12" x 12" 12" x 24" 24" x 24"	Factory-applied, washable shell-white Restex or Flame Resistant finish on face and bevels results in high light-reflection.
	<b>ECONACOUSTIC</b> Low cost wood fibre tile. Distinctive brushed texture surface offers unusual natural beauty. Cleanable with vacuum cleaner.	.55	1/2"	12" x 12" 12" x 24"	Prepainted white. May be spray-painted when other colors are desired.
	<b>THERMACOUSTIC</b> A mineral wool product especially adaptable to irregular surfaces. Spray-applied to any desired thickness. Rotproof. Also provides thermal insulation and fire protection.	.80 at 1/2" thickness on metal lath	As desired	Mono-lithic	Fissured texture can be repainted to harmonize with the decorative scheme without destroying its acoustical properties.
	<b>PERFORATED ASBESTOS-ZEROCEL WOOL SYSTEM.</b> Durable, incombustible acoustical system. May be "custom built" to job requirements. Inorganic composition. Will not retain moisture.	.80	1"	12" x 12" 12" x 24" 24" x 24" 24" x 48"	Furnished unpainted in natural gray color. Can be painted any color and repainted any number of times.

Lath, Plaster, Lime, Sheathing, Gypsum Roof Decks, Wall Paint, Textures, Rock Wool Insulation, Metal Lath, Roofing, Siding, Sound Control Products, Fireproof Wallboards

**modern**

# Design

patent no.  
2561584



This newest mark of refinement for today's bathrooms . . . Hall-Mack's new concealed Toilet Paper Holder . . . brings smart styling and tactful covering to a bathroom facility that hasn't changed much down through the years.

When not in use only the pleasing curvature of the chrome cover gives a hint of the contents . . . yet it opens instantly at the touch of a finger. It blends perfectly with all modern bathroom designs and colors . . . and easily accommodates a standard roll of toilet paper.

This new Concealed Toilet Paper holder is but another example of Hall-Mack quality expressed through originality of design.

## bathroom magic...

An original Hall-Mack idea, this new Concealed Toilet Paper Holder is the extra touch of convenience and charm that makes a home more desirable . . . more saleable! Only the finest materials and craftsmanship go into bathroom accessories bearing the Hall-Mack name.

In Hall-Mack's complete line of bathroom accessories you'll find a number of original developments with the kind of special appeal that sparks up an entire bathroom . . . and conveys the impression that the entire home is the result of careful thought and planning.

May we send you complete information on Hall-Mack's new Concealed Toilet Paper Holder . . . and on other exclusive Hall-Mack bathroom accessories?

**HALL-MACK®**  
*the BEST answer to*  
QUALITY BATHROOM ACCESSORIES  
...for Every Style and Budget!



Sold by leading plumbing,  
tile and hardware  
dealers everywhere.

## HALL-MACK COMPANY

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1000 Main Avenue, Clifton, New Jersey



get  
the  
facts



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...gives you profitable ideas for using pneumatic tube systems, both conventional and automatic—including dimensional drawings, architects' data, typical installations, case histories and lots more—all in two handy catalogs.

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**LAMSON CORPORATION**  
805 Lamson Street, Syracuse 1, N. Y.  
Gentlemen:  
Without any obligation on my part, please send me my copies of the Lamson Airtube Catalog and the Lamson Automatic Switch System Bulletin.

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Company \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

## Architectural Engineering

### PRODUCTS

(Continued from page 215)

insulation imparts exceptionally high heat resistance and increases dielectric strength 10 times above conventional industry standards. It is reported that this new development makes possible performance levels that have been physically and economically impossible for dry type transformers. The new insulation is now being delivered as standard equipment on the manufacturer's transformers. Marcus Transformer Co., Inc., Hillside, N. J.

### New Products for Heating and Ventilating

Several new products for home and industry were introduced at the 11th International Air Conditioning Exposition in Chicago by Trane Company.

Among these was a *Hidden Heating Baseboard Convactor*, designed to blend with contemporary or traditional rooms.



Baseboard convactor projects only 1½ in. from wall. Units may be painted to match most color schemes

The units may be recessed so that they project only 1½ in. from the wall and they can be painted to match most color schemes. A sponge rubber gasket behind the back plate guards against streaks on the wall. A convex reverse radius curve instead of a regular quarter round is reported to make sweeping and cleaning the floor much easier.

Other new Trane products include a *Cold Generator*. This packaged water chiller was designed to provide a single-

(Continued on page 222)

## Call the Office Nearest You for Prompt Reynolds Aluminum Service to Architects

Akron 8, Ohio, 105 State Bldg., Hemlock 4178  
Allentown, Pennsylvania, 546 Hamilton St., 5-4442  
Atlanta 3, Georgia, 1261 Spring St., N.W., Emerson 2731  
Baltimore 18, Maryland, Federal Land Bank Bldg., Hopkins 9800  
Battle Creek, Michigan, 614 Security National Bank Bldg., 3-4416  
Birmingham 3, Alabama, 1120 Brown-Marx Bldg., 4-6884  
Boston 16, Massachusetts, 442 Park Square Bldg., Liberty 2-0655  
Buffalo 3, New York, 1116 Rand Bldg., Washington 2606  
Camden 2, New Jersey, 5th & Cooper Sts., Woodlawn 4-9505  
Charlotte 2, North Carolina, Suite 102, 205 So. Church St., 6-1656  
Chicago 11, Illinois, 1000 Wrigley Bldg., Whitehall 4-2200  
Cincinnati 2, Ohio, 1120 Enquirer Bldg., Parkway 7420  
Cleveland 15, Ohio, 1146 Hanna Bldg., Cherry 1-7214  
Columbus 12, Ohio, 1384 Grandview Ave., Room 225, Kingswood 6444  
Dallas 4, Texas, 3200 Maple Ave., Sterling 5186  
Dayton 2, Ohio, 305 Eleven W. Monument Bldg., Hemlock 6344  
Denver 2, Colorado, 639 Continental Oil Bldg., Main 8641  
Des Moines 9, Iowa, 316 Des Moines Bldg., 8-1906  
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Grand Rapids 2, Michigan, Beverly and Porter Sts., 3-0156  
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Pittsburgh 19, Pennsylvania, 3210 Grant Bldg., Atlanta 1-3445  
Portland 9, Oregon, 935 N. W. 12th Ave., Rm. 213, Atwater 9474  
Richmond 19, Virginia, Fifth & Cary Sts., 7-2941  
Rochester 4, New York, 512 Temple Bldg., Hamilton 6250  
Saginaw, Michigan, 702 Second National Bank Bldg., 5-2136  
Salt Lake City 1, Utah, 22 South Main, 5-4236  
St. Louis 8, Missouri, 4144 Lindell Blvd., Franklin 2000  
San Diego 1, California, 338 Land Title Bldg., Main 8-1516  
San Francisco 3, California, 1226 Folsom St., Klondike 2-3708  
Seattle 9, Washington, 1844 Westlake Ave. North, Alder 6556  
South Bend, Indiana, 306 S. Notre Dame Ave., 2-6673  
Spokane 10, Washington, 309 Empire State Bldg., Riverside 4592  
Syracuse 2, New York, 420 University Bldg., 2-6848  
Tampa 2, Florida, 523 Stovall's Professional Bldg., 2-7284  
Toledo 2, Ohio, 1220 Madison Ave., Room 219, Garfield 2-186  
Tulsa 14, Oklahoma, 214 Boulder Bldg., 5-1400  
Washington 6, D.C., 503 World Center Bldg., National 5136  
Wichita 2, Kansas, 304 Wheeler-Kelly-Hagney Bldg., 4-5916  
York, Pa., Room 302, 25 N. Duke St., 6664  
Youngstown 12, Ohio, 5621 Market Street, 2-1913



*Wide Andersen Casements for both view and ventilation—Charles Klopp, architect*

## selection in Andersen Casements

Andersen in its unit catalog. And keep in mind, architects and builders can combine stock Andersen Casement Units and picture windows so that the number of possible combinations has no limit!

Sash of the new wide Andersen Casement are 1'-10½" wide. Available in single light or horizontal light glazing. Also glazed single light with new Andersen Welded Double Insulating Glass. Five heights and five widths, plus combinations with picture windows.

For more information, see your millwork dealer or write Andersen Corporation, Bayport, Minnesota.

*Write for Detail Catalog or Tracing File; or see Sweet's files for specification data.  
WINDOWALLS are sold by millwork dealers.*

famous for

**ANDERSEN**  
*Windowalls*

TRADEMARK OF ANDERSEN CORPORATION

*Andersen Corporation* BAYPORT • MINNESOTA



**When they ask . . .**  
**"WHO WAS THE ARCHITECT**  
**ON THIS JOB?"**  
**he can step forward with pride**

**This flooring is Wright Rubber Tile.** It will need no apology ten years from today . . . or one hundred years from today! For Wright Rubber Tile far surpasses conventional tile for long life and lasting beauty.

Through the years, a Wright Rubber Tile floor will bear witness to your sound judgment in having specified it. It will bring your client lasting satisfaction. It will confirm your own good reputation.

**Economical**—Because of its exceptional durability, cost per year of Wright Rubber Tile is less even than inferior floor covering.

**Versatile**—Because of its high resistance to damage, Wright Rubber Tile is ideal for all types of construction, industrial, commercial and residential. Twenty-three decorator colors to choose from.

**Easily Maintained**—All floors require maintenance, but Wright Rubber Tile requires *less* than any other.

We invite you to compare Wright Rubber Tile with any floor covering on the market. Send for a free sample. Then specify Wright Rubber Tile with complete confidence.

WRIGHT MANUFACTURING CO.  
 5205 Post Oak Rd., Houston 5, Texas



FLOORS OF DISTINCTION

- ♦ WRIGHTEX—Soft Rubber Tile
- ♦ WRIGHTFLOOR—Hard Surface Rubber Tile
- ♦ WRIGHT-ON-TOP Compression Cove Base

## Architectural Engineering

### PRODUCTS

(Continued from page 218)

unit source of large quantities of cold water for air conditioning and refrigeration systems requiring between 10 and 50 tons of cooling, and it will be made in 10 sizes. It is particularly suited to offices, stores, hotels, shopping centers, hospitals and apartment buildings.

A new *School Heating System*, also developed by Trane, was designed to insure equal comfort and health conditions for every pupil in the classroom. The new unit ventilator system contains ducts, with grill outlets, which extend along the schoolroom's outside wall and under glass areas at about window-sill height. Tempered air from the unit ventilator is sent to the room through the unit grill and through the duct outlets. The air stream blocks drafts from cold surfaces and distributes heat and ventilation to all parts of the room. The Trane Co., La Crosse, Wis.

### Plastic Safety Guard for Doors

The *Stan-Guard* Plastisol Finger Guard is a flexible plastic stripping which runs the full length of a door at the jamb, completely sealing off from top to bottom the danger area where injuries to fingers might occur. The stripping is fastened to the door and the door frame with aluminum anchor moldings which hold it securely in place without interfering in any way with the operation of the door. The manufacturer reports that the guard can be installed on almost any hinge- or pivot-hung door, and that it is suitable for use on manually operated or automatic doors of either wood or metal construction. It is furnished in a variety of widths to fit the requirements of individual installations. The stripping is colored aluminum gray to match aluminum framed doors and to provide an attractive neutral complement to other trim. It is made from the same material used in the manufacturer's "Magic Carpet" automatic door opener installations, and can be easily cleaned with soap and water or other normal cleaning solutions. In a life test of one million cycles fast openings, the material reportedly showed no defects. Magic Door Div., The Stanley Works, 195 Lake St., New Britain, Conn.

(Continued on page 220)



## ***History***

# **THE ONLY COMPLETELY ELEVATOR SYSTEM**

## ***for Heavy-Traffic Buildings***

- Eliminates attendants...even starters
- Adjusts instantly and automatically to any traffic demand...no dial settings necessary
- Saves up to \$7,000 per car a year

Westinghouse Automatic Traffic Pattern Control is the culmination of years of research. Added to Selectomatic, Synchro-Glide and Operatorless features, it is the finest expression of superlative elevator service available today. Its many special features assure elevator service of uncanny efficiency... swift, comfortable, utterly dependable.

Tested and proved in the Michigan Bell Telephone Building in Detroit, this revolutionary new system offers immense cost savings... up to \$7,000 per car a year. It

unerringly responds to all changes in traffic demands during the *entire 24-hour day*... instantly and automatically without attendants or any dial settings by starters. Up-peak, down-peak, off-peak, coffee-time, and after-hours traffic is handled more efficiently than with starters, who, if used, are entirely free for information service.

For new building projects or modernization, find out about Westinghouse Automatic Traffic Pattern. For complete details, call our nearest office.

## **Westinghouse Elevators**

PASSENGER AND FREIGHT ELEVATORS • ELECTRIC STAIRWAYS • PROTECTIVE MAINTENANCE AND SERVICE

**YOU CAN BE SURE...IF IT'S** *Westinghouse*

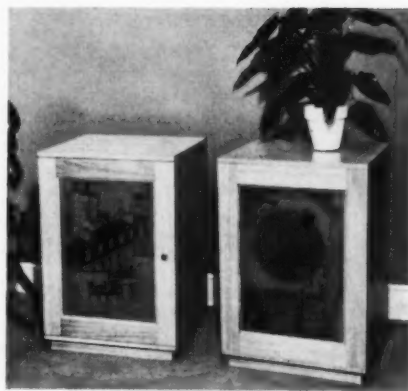
J-98673

## PRODUCTS

(Continued from page 222)

### Architect Advisory Service For Radio-Phonograph Design

Now available to the architect who wishes to design his own wall-unit radio-phonograph is a new *Orpheo* technical advice service for high fidelity sound reproduction. Technical information on parts, speaker sizes, etc., is given so that the architect may incorporate into his

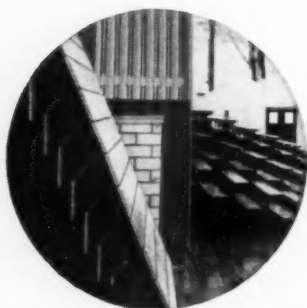


◀ Cabinets house high fidelity radio-phonograph combination and loudspeaker, respectively. Shown in bleached mahogany



# 3 gyms in one make sense

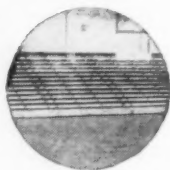
**HORN Seats**—folded mean plenty of room for practice. A smooth safe surface protects players.



**HORN Seats**—extended mean plenty of room for the paying crowd. Comfortable, easy to clean.



**HORN Partitions**—electrically operated, easily folded for exhibitions, or extended to provide practice gyms.

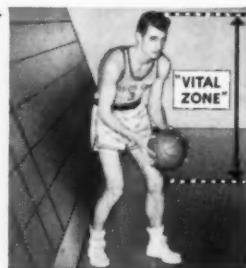


**FOR SAFETY**, plan with HORN! Horn folding gym seats provide a smooth, sloping surface when folded... real protection for the vital zone!

They'll pay for themselves in use! Horn planning and equipment give you maximum gym use—for exhibitions that pay—for efficient practice.

Your local Horn representative helps you plan. Horn factory crews supervise installation. Horn quality construction gives years of trouble-free service.

Write today for details on Horn folding gym seats and partitions—and the new folding stages.



**Horn**

SCHOOL EQUIPMENT DIVISION OF  
THE BRUNSWICK-BALKE-COLLENDER COMPANY  
623 SOUTH WABASH AVENUE, CHICAGO 5, ILLINOIS

own design the best possible sound reproduction. In addition to the service, the company has complete high-fidelity radio phonographs for sale, in either contemporary or traditional styles in a variety of finishes, and will also make a set to order. Old furniture and antiques can also be adapted to electronic and acoustic requirements. Reported to combine high audio engineering and esthetic standards, a selection of units utilizing advanced developments of the radio and electronics industry is available. Orfeo, 19 E. 48th St., New York, N. Y.

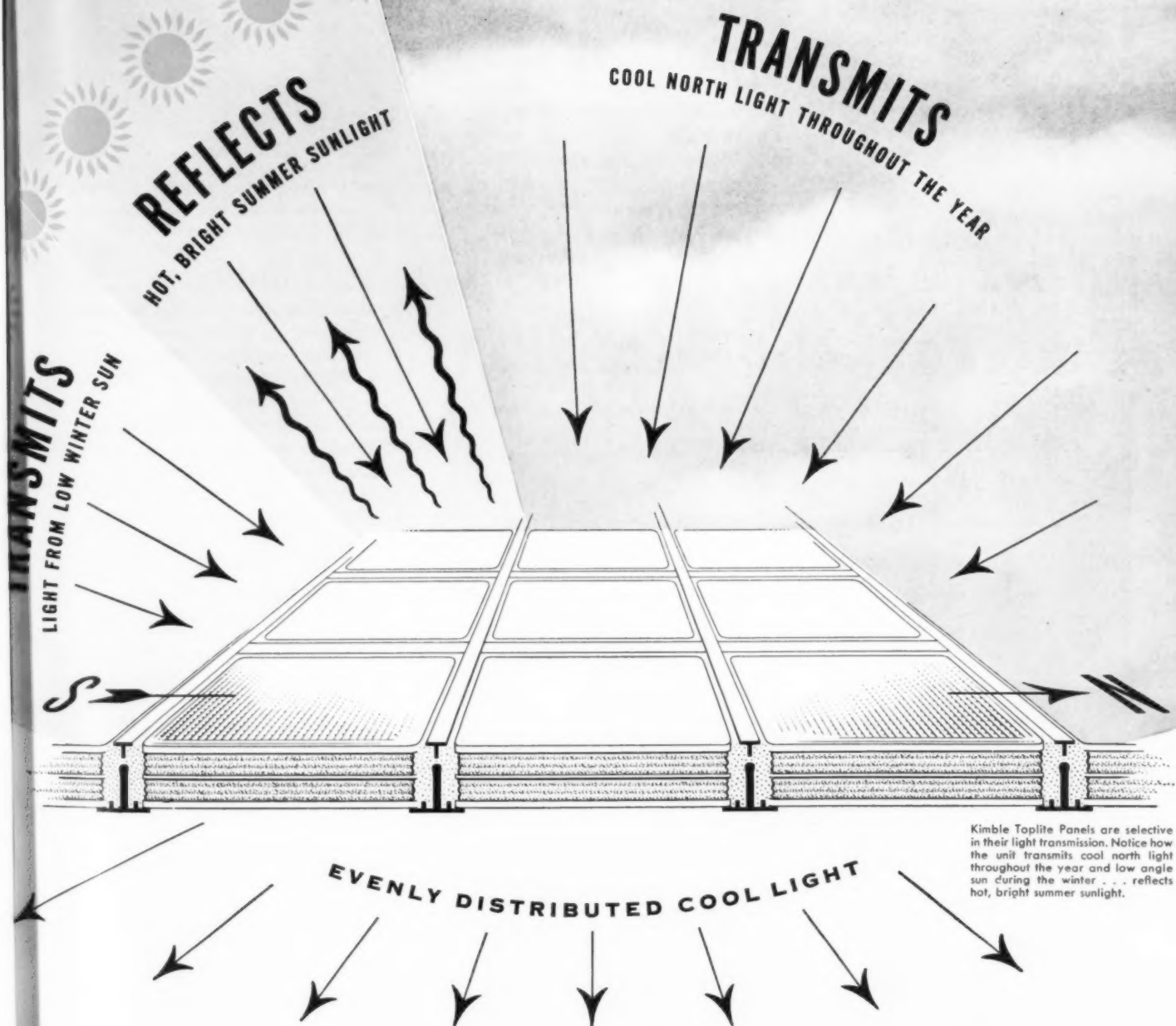
### Primer for Vinyl Finishes On Rusty Steel Surfaces

A paint primer which covers and adheres to rust, acting on it to bond steel, rust and primer together in both a chemical and mechanical bond, is now being marketed under the trade-name *Rustbond Primer*. The product is said to wet and change rust, but does not dissolve it nor pop it off the surface. In atmospheres which corrode steel at a steady, slow rate, it reportedly prevents further rusting.

The primer was developed primarily to stop the peeling of polyvinyl chloride finishes from rusty steel and has been used principally to date for government projects. Field experience, empirical tests and electrical and mechanical measurements are cited as having demonstrated the following about the primer: (a) It adheres excellently to rusty steel, rust or sandblasted steel surfaces, and will not adhere to smooth, shiny steel unless thoroughly aged; (b) It covers sharp and rough edges as heavily as flat surfaces; (c) It is unplasticized and will not burn in an ordinary flame; (d) It reduces rust, manifestly to iron, but does not form water or liberate free oxygen; (e) After 8 weeks of aging it resists the action of all common paint removers including xylene and methyl ethyl ketone. After five months adherence is better than ever; (f) It has good corrosion resistance to most acids and, after aging, most solvents.

The product is said to cost no more than good standard primers, covers the same area per gal., and is applied by brush. Besides vinyl finishes, it is also good for rubber base, neoprene and other corrosion resisters. Carboline Co., 7603 Forsyth Blvd., St. Louis 5, Mo.

(Continued on page 223)



Kimble Toplite Panels are selective in their light transmission. Notice how the unit transmits cool north light throughout the year and low angle sun during the winter . . . reflects hot, bright summer sunlight.

## ANNOUNCING TOPLITE—a new idea in daylighting

**Kimble Toplite Panels limit and control the heat and amount of light entering a building from overhead.**

Here is the new way to daylight deep interior areas too far removed to be effectively reached by conventional, side-wall, prismatic glass block panels.

Kimble Toplite Panels distribute diffused daylight evenly over wide areas that are far from outside walls. They reflect hot summer sun . . . have unusual ability to reduce solar heat transmission. There are no hot spots, eye-fatiguing glare, nor concentrations of light. Kimble Toplite

Panel Units have an insulating value equivalent to double glazing or side-wall glass block.

Want more information about this great, new advance in daylighting? Write Insulux Glass Block Div., Kimble Glass Company, Dept. AR5, Box 1035, Toledo 1, Ohio.



Kimble Toplite supplements Insulux penetration in deep rooms.



**KIMBLE GLASS COMPANY**

Toledo 1, Ohio—Subsidiary of Owens-Illinois Glass Company



## PRODUCTS

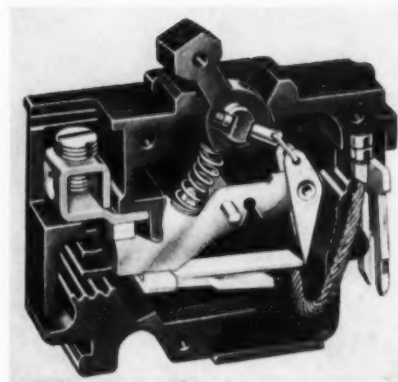
(Continued from page 226)

### Circuit Breaker

The *Slab-lok* Circuit Breaker, for use in place of fuses, consists of a switching mechanism and a thermal-magnetic overload device. When circuits are overloaded, the bi-metal functions to trip the breaker and throw the handle to the "off" position. When short circuits occur,

the magnetic action of the breaker is reported to trip it instantly. It can be easily reset by moving the handle to the "on" position. The breaker is claimed to be capable of interrupting 5000-amp and operating at least 10,000 times.

The five elements making up the breaker are: the metal heart including contact, bi-metal, magnetic trip, line stab and braid; handle; load terminal and contact (one integral piece); pick-off spring; and case. Assembly of the metal heart is done on automatic machinery before it is set into case. Some of the



Circuit breaker, for use in place of fuses, has magnetic action which trips breaker when short circuits occur

*50,000 homes built in the past year  
had this mark of a better home*

**Van-Packer** GENUINE SAFETY **CHIMNEY**

Gives architects freedom in design. Heating plant and hot water heater can be centrally located. Shorter heat runs—greater fuel savings. Underwriters' listed. F. H. A. and code accepted. No job delays. Immediate delivery from nearby jobber. Reference Sweet's Catalog.

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Also Manufactured and Distributed in Canada by  
C. A. McRobert and Son, Ltd., St. Laurent, Quebec.

features of the circuit breaker are: only one terminal—a single-screw solderless connector on all ratings situated on the load side; arc chamber and baffles designed to cool, break up and rapidly extinguish arcs; arc-resisting case molded of special high dielectric plastic; self-locking 4-way stabs—simple design, securely and safely connect to main busses. Federal Electric Products Co., 50 Paris St., Newark 5, N. J.

### Laminated Tied Arch

The *Rilco Type 75*, a new laminated wood tied arch recently developed by the manufacturer, reportedly permits quick erection of low-cost clear span buildings. Any type of roof covering can be used with the arch, including metal, wood, asphalt or asphalt shingles. The arch is light in weight and requires no special skill or equipment to assemble and erect. Since it is formed in two segments with a straight section on either side of the ridge connection, it has no flat center section such as is found in regular arch construction. The arch is laminated of selected finish grade, kiln-dried West Coast Douglas Fir. Ties and vertical hangers are cut to size from solid dimension lumber and all splices are made with Teco split ring connectors. Arches and ties are cut and drilled by the manufacturer and shipped unassembled together with the necessary connection hardware. The new arch is expected to prove especially popular for barns, machine sheds and the like, wherever quick, low-cost construction and post-free interiors are desired. Spans range from 24 to 40 ft, with center heights ranging from 4 ft 2½ in. to 8 ft 9½ in. Rilco Laminated Products, Inc., First National Bank Bldg., St. Paul, Minn.

(Continued on page 233)

**CONSULT  
YOUR STRAN-STEEL  
FRAMING DISTRIBUTOR**

**ALABAMA:** Birmingham Steel Buildings, Inc., Birmingham.

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**GEORGIA:** Steel Builders, Inc., Columbus; Savannah Iron and Wire Works, Savannah.

**ILLINOIS:** Lauren Engineering Corporation, Chicago.

**INDIANA:** Civilian Building & Supply, Inc., Ft. Wayne; Valley Supply Corp. of Logansport.

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**OHIO:** Argus Industries, Cincinnati; Artcraft Ornamental Iron Co., Columbus; Framing Systems, Inc., Cleveland.

**PENNSYLVANIA:** Alton, Inc., McKeesport; Conyngham Sales Company, Hazelton; Philadelphia Welding & Framing Co., West Conshohocken.

**SOUTH CAROLINA:** Todd Engineering & Supply Co., N. W., Charleston.

**TENNESSEE:** Tucker Steel Corporation, Knoxville; Harlan Steel Building & Supply Co., Nashville; John A. Denie's Sons Co., Memphis.

**TEXAS:** Blue Diamond Company, Dallas; General Supply Co., Inc., San Antonio; Buie Building Material Co., Houston; Pre-Fab Building Supply Corp., Beaumont.

**UTAH:** U. S. Rock Wool Co., Salt Lake City.

**VIRGINIA:** J. K. Parker, Inc., London Bridge; Arlington Light Steel Structures, Inc., Arlington.

**WASHINGTON:** Dix Steel Building Co., Spokane; Leckenby Structural Steel Co., Seattle.

**WISCONSIN:** Arnold Equipment Corporation, Milwaukee.

**Architectural Engineering**

**PRODUCTS**

(Continued from page 228)

**Packaged Underground System For Sprinkling Lawns**

A new packaged *Everspray* kit is said to permit the average homeowner to enjoy the benefits of an underground sprinkling system for his lawn. The basic kit is comprised of 6 "pop-up" sprinkling heads, intake valve, automatic



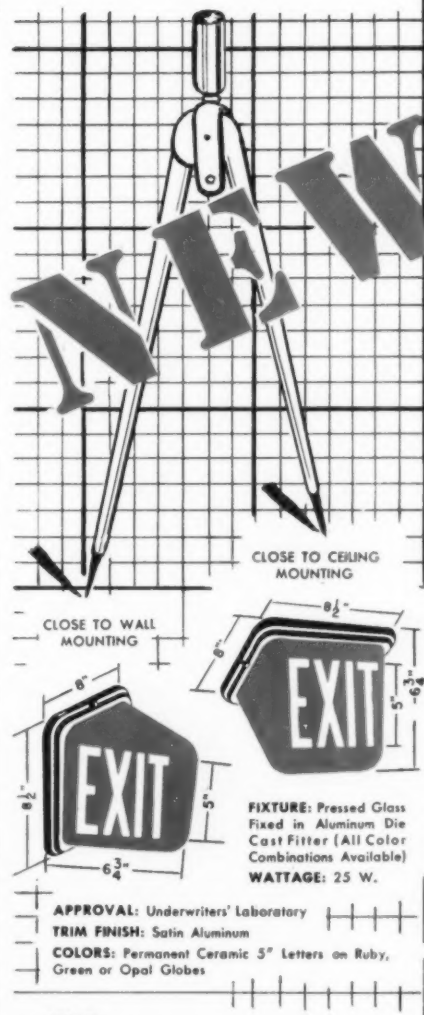
Sprinkler head, center of connection, has pop-up device which raises above ground surface when water is turned on

drain valve, copper piping and brass fittings. It will water an area of 1000 sq ft and reportedly can be installed by the homeowner in a single afternoon, without damage to the sod. The system requires a trench only 4 in. deep and can be assembled with two adjustable wrenches. For yards over 1000 sq ft additional kits may be installed and a coupling device which connects separate systems to a single outlet can be attached to the main water supply.

The system's "pop up" sprinkler heads rise above the surface of the ground when the water is turned on and automatically sink flush level with the ground when the water is turned off. In this way obstructions which might get in the way of mower blades, rakes or rollers are eliminated. The heads are adjustable for fine or heavy spray and for full circle, half circle or quarter circle spray patterns. The entire system drains itself automatically after each use, eliminating possible damage from freezing. Solid brass and copper alloy construction make it resistant to corrosion and rust. Adaptable to operation under high or low water pressures, the system can be installed in a variety of sprinkling

(Continued on page 236)

**PERFECLITE**  
MODERN DESIGN  
FLOWING LINE EXITS



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**PERFECLITE CO.**  
1457 East 40th Street  
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**FREE**  
PLEASE SEND ME  
DATA SHEET EX-53-A

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**No building too**

# ductless UniTrane



## ACCURATELY RATED AND TESTED

Every UniTrane unit is carefully designed, manufactured and tested to conform with published TRANE capacity ratings. Units require no maintenance other than semi-annual check-ups of oil cups and filters. Sturdy, die-formed steel cabinets are designed to withstand years of service.



***for individual room control of***

MANUFACTURING ENGINEERS OF HEATING, VENTILATING AND AIR



large...few too small for

# room-controlled air conditioning

**Provides advantages of central system  
plus best features of the unit system!**

**It's different!** The UniTrane System of air conditioning offers advantages of a central system PLUS quiet, compressor-free room units that cool or heat, dehumidify, ventilate, filter and circulate the air . . . and all this without the use of central system ducts!

**Each tenant is boss**—Because UniTrane provides individual room control, it meets widely varied demands in large office buildings, hospitals, hotels and commercial buildings down to small apartments and motels. Each tenant sets the temperature and ventilation of his room just as *he* wants it, without affecting any other room.

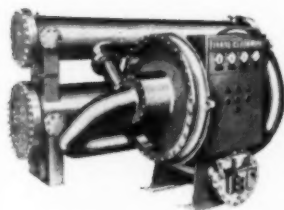
**Big space saver**—UniTrane saves space in many ways. Its single piping circuit handles chilled water in summer, hot water in winter. Ventilation air is introduced directly through the wall into the individual room units. The compact room units are only 25-inches high . . . can be recessed under windows. Large equipment rooms and accompanying ductwork are eliminated.

**Accurate design data**—Designing a UniTrane System is essentially a matter of selecting accurately rated units for the various rooms and zones. No multi-room buildings are too large to permit UniTrane air conditioning in each individual room.

**Simple and flexible**—UniTrane is nearly as simple to install and operate as is a standard heating system. It can easily be extended to new building additions. You can shift units or add units to meet changing requirements. You can install UniTranes for heating only and add central water chilling equipment later. You can shut off rooms and sections not being used. Even partially finished or partially occupied buildings can have complete room-controlled air conditioning with UniTrane.

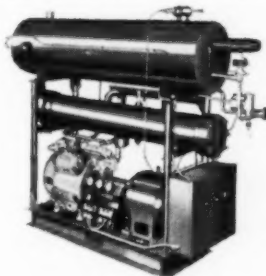
For complete information, contact your Trane Sales Office or write The Trane Company, LaCrosse, Wisconsin, for Bulletin DS 420.

**For over 50-room UniTrane installations . . .**

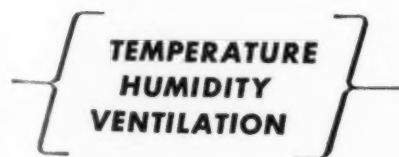


**CENTRAVAC** A complete centrifugal water chilling system, hermetically sealed. Five models from 45 to 200 tons. Automatic throttling controls permit efficient operation down to 10% capacity. Power consumption closely proportionate to load through entire range.

**For 10 to 50-room UniTrane installations . . .**

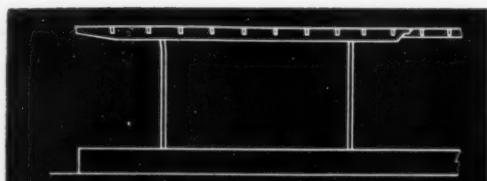


**COLD-GENERATOR** This unit delivers chilled water from one compact package . . . brings you a complete refrigeration cycle, factory engineered, factory assembled, factory tested, factory guaranteed! Only simple plumbing and electrical connections needed to install.

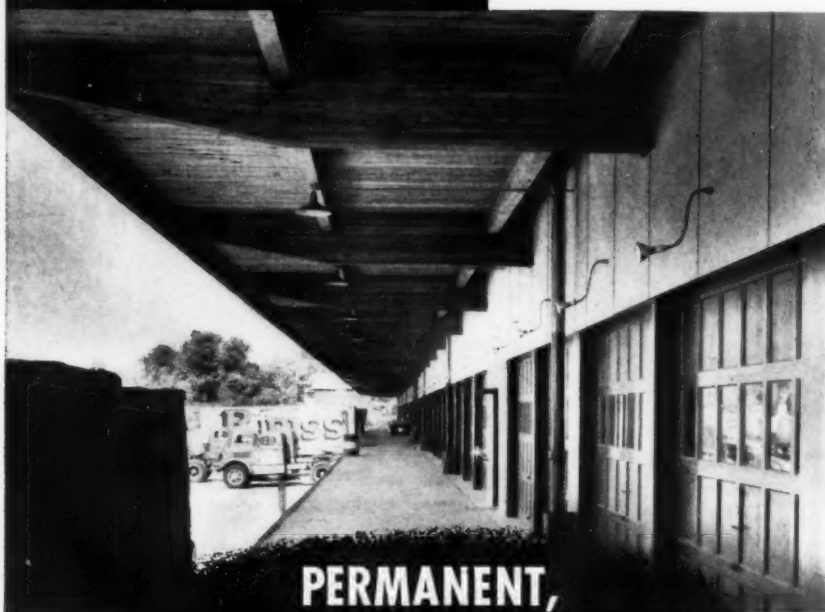


# TRANE UniTrane

CONDITIONING EQUIPMENT The Trane Company, La Crosse, Wis. • East. Mfg. Div., Scranton, Penn. • Trane Co. of Canada, Ltd., Toronto • 87 U.S. and 14 Canadian Offices



Warehouse of Riss & Company, Boston, Mass. Size 138x500 feet. Roof is cantilevered to provide covered loading dock, and is supported by glued laminated beams spaced at 20 feet, with purlins of 6'8" spacing.



## PERMANENT, ECONOMICAL WAREHOUSES

*designed for today's service, with  
flexibility for tomorrow's changes*

Combining permanence, economy and adaptability, this warehouse will remain a profitable investment for generations. Large open areas of floor space promote efficient use of modern equipment and methods, make the building suitable for changing requirements of the future.

Key to the efficient design of the building is the system of glued laminated beams which supports the roof. These are dimensionally stable structural members which stubbornly resist destruction by fire, and lower construction costs due to...

**Fast erection of prefabricated beams, with practically no jobsite assembly.**

**Low walls and no unusable cubage which reduce both construction and operating costs.**



### Get Full Information on Glued Laminated Timbers

Detailed information on this modern engineering material is contained in the authoritative booklet, "Modern Construction with Engineered Timbers". Get it today from your nearest Timber Structures office; or write us directly and your copy will be sent immediately.

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Representatives throughout the United States and Canada

## Architectural Engineering

### PRODUCTS

(Continued from page 233)

layout patterns. It can be assembled above ground and tested for pattern and coverage before it is installed beneath the surface. Installation can be made any time after the first thaw and before the first frost of the season. Everspray Div., Everhot Products Co., 2001-09 W. Carroll Ave., Chicago 12, Ill.

### Built-In Electric Clock

Requiring only a four-in. wall box, the *Tel-in-Wall* clock has been designed specifically for kitchen or bathroom. Constructed of white plastic, the clock is equipped with a night light at the top and two outlets at the bottom for plugging in such electrical appliances as toasters, coffeepots, heaters or electric razors. Projecting only  $\frac{3}{8}$  in. from the wall at the top and  $1\frac{3}{8}$  in. at the bottom, the unit measures  $7\frac{1}{8}$  in. high by  $4\frac{7}{8}$  in. wide. The dial is white with black characters and red hour dots. The hour and minute hands are black with a seep-second hand in red. A 7-w bulb under a hood at the top serves as a night light to prevent stumbling in the dark. General Electric Co., Telechron Dept., Ashland, Mass.

### Resin Adhesive for Non-Porous Surfaces

An epoxide resin adhesive suitable for bonding non-porous surfaces, *Epiphen* XR-823 is a new development from the Borden Company's chemical division. The product is reported to have shown excellent results in bonding metal, glass, ceramic materials, wood, natural or synthetic rubber, and phenolic and glass fiber laminates, either to themselves or in combinations. It is also said to be resistant to boiling water, acids, alkalis and most organic solvents. The adhesive is also recommended by the manufacturer for any casting and coating operations where shrinkage cannot be tolerated. Good wetting properties, fidelity, minimum shrinkage, high dielectric and mechanical strengths and high heat resistance of cast epoxides are cited by the manufacturer as factors which have resulted in their wide utilization for potting electronic assemblies, resistors

(Continued on page 240)

# to guard against plaster cracks

- 1 KEYMESH on ceilings**
- 2 KEYBEAD on outside corners**
- 3 KEYCORNER on inside corners, joints and ceiling-wall junctures**

**KEYMESH** applied on the entire ceiling area of any room assures more crack-resistant plaster surfaces. Because stresses and strains are distributed more evenly, longer plaster life results. There is no limit to the interior design and construction possibilities when ceilings are completely Keymesh reinforced. Keymesh also provides strong plaster reinforcement, with desirable heat transfer properties, for ceiling radiant heat installations.

**KEYCORNER** applied at corners, joints and ceiling-wall junctures prevents future plaster crack troubles. Its preformed-for-corners, convenient width and easy-to-handle features provide fast, economical reinforcing exactly where needed. It snaps into corner shape by merely flexing the cut piece. And, Keycorner lies flat, too, for flat joint reinforcing.

**KEYBEAD** produces strong, economical "true" outside plaster corners. The open-mesh design of the Keybead wings permits plaster to flow through the steel wires and give a generous bond of plaster to lath . . . a solid plaster corner results. This thorough steel wire embedment combined with the true-formed bead makes strongly reinforced, more highly crack-resistant outside plaster corners.

**THE COMBINED USE** of Keymesh on the entire ceiling area with Keycorner at inside corners and joints and Keybead on outside corners, results in trouble-free, lasting plaster beauty . . . a valuable selling advantage to plasterers, lathers, builders, contractors and architects alike. It promotes greater owner satisfaction—more *quality* plaster jobs.

**KEYMESH**  
3' and 4' widths,  
150-ft. rolls,  
Galvanized

**KEYCORNER**  
4", 5" and 6" widths  
150-ft. rolls,  
Galvanized

**KEYBEAD**  
7', 8', 9', 10', 12' lengths  
2½" wings, Galvanized. Packed  
in convenient cartons

Other gauges and sizes available

## KEYSTONE STEEL & WIRE COMPANY

Peoria 7, Illinois

KEYMESH • KEYCORNER • KEYBEAD • KEYSTONE NAILS • KEYSTONE WELDED WIRE FABRIC •  
KEYSTONE TIE WIRE • KEYSTONE NON-CLIMBABLE FENCE • KEYSTONE ORNAMENTAL FENCE

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DRAWING INK  
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Ends nuisance of frequent stops to re-fill—insures finer, smoother work for artist or draftsman. Unequaled for technical drawing, freehand drawing, sketching, stenciling, or lettering. Interchangeable nibs insure uniform line thickness from finest hairline to  $\frac{3}{8}$  inch thick. GRAPHOS uses any drawing ink. Light touch, perfect balance. Thousands in use.

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Broken Lines?*

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**Pelican**

**WATERPROOF DRAWING INKS**

These matchless inks permit drawing finest lines without breaking or running, with crisp, sharp-cut definition. 100% waterproof, free-flowing, quick-drying. Intense opaque black and 19 vivid colors—blendable and dilutable. In 1 oz. bottles, cartridges, and larger containers. Try them—you'll like them.

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New York 16, N. Y.

Sole Distributors for Canada

Heinz Jordan & Co.  
73 Adelaide St. West  
Toronto, Ont., Can.

## Architectural Engineering

### PRODUCTS

(Continued from page 236)

and other electrical and electronic applications. Transparency of the product permits its use in the production of lenses when unfilled resin is employed. Test kits are available from the manu-



Epoxide resin adhesive bonds non-porous surfaces, as shown above

facturer at nominal cost. The Borden Co., Chemical Div., 350 Madison Ave., New York 17, N. Y.

### Portable Photo-Copier

The *Contoura*, a small (10½ by 8½ by 2¼-in.), lightweight (4 lb) portable photo-copier which can be stowed away in a desk drawer and carried about in a brief case, reportedly will copy any kind of printed, written or pictured matter and can reproduce from a curved book page as easily as from a flat document. The device is said to be ideal for copying specification sheets, portions of blueprints and sketches, sections of deeds or complete articles in periodicals and books. The copier operates in a lighted room, since it uses a special slow-speed-emulsion photographic paper which can be handled under normal lighting conditions. Development of the paper does not require a darkroom and employs only standard photographic chemicals. The user can develop copies himself or have them developed by any commercial photo-finisher. Both positive and negative copies can be made.

Operation of the device is as follows: first, the machine is plugged into an ordinary 110-120-v AC or DC outlet

(Continued on page 244)

## Simpson ACOUSTICAL CONTRACTORS

- ALABAMA**  
Badham Insulation Co., Inc., Birmingham  
Stokes Interiors, Inc., Mobile
- ARIZONA**  
Asbestos Engineering & Supply Co., Phoenix  
Hall Insulation & Tile Co., Tucson
- ARKANSAS**  
National Builders' Supply, Inc., Little Rock
- CALIFORNIA**  
Coast Insulating Products, Los Angeles and San Diego  
Cramer Company, San Francisco and Fresno
- COLORADO**  
Construction Specialties Co., Denver
- CONNECTICUT**  
W. T. Roberts Construction Co., East Hartford
- DISTRICT OF COLUMBIA**  
Kane Acoustical Co., Washington
- GEORGIA**  
Dumas and Searl, Inc., Atlanta
- ILLINOIS**  
General Acoustics Co., Chicago  
Melvin R. Murdy, Moline
- INDIANA**  
The Baldus Co., Inc., Fort Wayne  
E. F. Marburger & Son, Inc., Indianapolis
- IOWA**  
Kelley Asbestos Products Co., Sioux City
- KANSAS**  
Kelley Asbestos Products Co., Wichita
- KENTUCKY**  
Atlas Plaster & Supply Co., Louisville
- MASSACHUSETTS**  
W. T. Roberts Construction Co., Cambridge
- MINNESOTA**  
Dale Tile Company, Minneapolis
- MISSISSIPPI**  
Stokes Interiors, Inc., Jackson
- MISSOURI**  
Kelley Asbestos Products Co., Kansas City  
Hamilton Company, Inc., St. Louis
- NEBRASKA**  
Kelley Asbestos Products Co., Omaha
- NEW JERSEY**  
Kane Acoustical Co., Fairview
- NEW MEXICO**  
Asbestos Engineering & Supply Co., Albuquerque
- NEW YORK**  
Robert J. Harder, Inc., Lynbrook, L. I.  
Kane Acoustical Co., Inc., New York  
Davis-Fetch & Co., Inc., Buffalo, Rochester and Jamestown  
Davis Acoustical Corp., Albany
- NORTH CAROLINA**  
Bost Building Equipment Co., Charlotte
- OKLAHOMA**  
Harold C. Parker & Co., Inc., Oklahoma City  
Kelley Asbestos Products Co., Tulsa
- OHIO**  
The Mid-West Acoustical & Supply Co., Cleveland, Akron, Columbus, Dayton, Springfield and Toledo
- OREGON**  
Acoustics Northwest, Inc., Portland  
R. L. Elfstrom Co., Salem
- PENNSYLVANIA**  
Jones Sound Conditioning, Inc., Ardmore
- TENNESSEE**  
John Beretta Tile Co., Inc., Knoxville  
John A. Denie's Sons Co., Memphis  
The Workman Co., Inc., Nashville
- TEXAS**  
Blue Diamond Company, Dallas  
Otis Massey Co., Ltd., Houston  
Builder's Service Co., Fort Worth
- UTAH**  
Utah Pioneer Corporation, Salt Lake City
- VIRGINIA**  
Manson-Smith Co., Inc., Richmond
- WASHINGTON**  
Elliott Bay Lumber Co., Seattle
- WISCONSIN**  
Building Service, Inc., Milwaukee
- CANADA**  
Albion Lumber & Millwork Co., Ltd., Vancouver, B. C.  
Hancock Lumber Limited, Edmonton, Alberta

# we chose Cushionlok Carpet for new Lord & Taylor Store"

says William T. Snaith of Raymond Loewy.

**Says Mr. Snaith:** "We planned the Lord & Taylor Store with the idea of creating an interior that would provide not only a pleasant environment for customers, but a background that would best lend itself to the display and sale of merchandise.

"Bigelow Cushionlok Carpet was an outstanding factor in helping us achieve the desired results.

"From a decorative point of view, Bigelow's Cush-

ionlok fits ideally into the color scheme and décor of the store.

"Cushionlok absorbs the noise of voices and other distracting sounds, carpeting the showrooms with quiet dignity.

"And as we well know, Cushionlok bears up under the heavy demands of constant traffic and requires a minimum of maintenance."

**Are you planning an installation?** Please call on Bigelow's experts as early as possible. Take advantage of their long experience. You will find them courteous and helpful.

Get in touch with Bigelow today by calling the sales office nearest you. There is no charge for this service!

For a sample of Cushionlok, write on your business stationery to BIGELOW, Dept. A-1, 140 Madison Avenue, New York 16, N. Y.



## BIGELOW Rugs and Carpets

*Beauty you can see . . .  
quality you can trust . . . since 1825*

**Bigelow sales offices are located in the following strategic cities:** Atlanta, Ga.; Baltimore, Md.; Boston, Mass.; Buffalo, N. Y.; Chicago, Ill.; Cincinnati, Ohio; Cleveland, Ohio; Columbus, Ohio; Dallas, Tex.; Denver, Col.; Detroit, Mich.; Indianapolis, Ind.; Kansas City, Mo.; Los Angeles, Calif.; Milwaukee, Wisc.; Minneapolis, Minn.; New York, N. Y.; Philadelphia, Penna.; Pittsburgh, Penna.; St. Louis, Mo.; Salt Lake City, Utah; San Francisco, Calif.; Seattle, Wash.; Hartford, Conn.; High Point, N. C.

# Another Globe Elevator!

America's Most  
Economical Elevator  
to Install, Operate  
and Maintain for  
APARTMENTS  
FACORIES  
HOSPITALS  
✓ PLANTS  
STORES  
WAREHOUSES



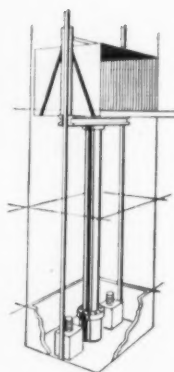
This Globe OiLIFT Elevator, constantly hauling beef from processing plant level to refrigerator storage, qualifies as one of the world's busiest. Ascent is powered by an oil-operated cylinder. Descent is by gravity controlled through the hydraulic mechanism. Instant accurate leveling that matches monorail sections inside and outside the car saves time in loading and unloading.

Globe OiLIFT Elevators cost less to install and operate. Maintenance cost is so low as compared with that of cable types the owner will more than save the original cost over a period of 30 years. Globe OiLIFT Elevators are assembled to meet your specifications. Send today for the new Globe OiLIFT Elevator Catalog AR-512.

# GLOBE

THE BEST LIFT

GLOBE HOIST COMPANY • 1000 E. Mermaid Lane, Philadelphia 18, Pa.  
(Factories at Des Moines, Iowa and Philadelphia, Pa.)



The OiLIFT principle eliminates expensive penthouse construction and load-bearing shaft-way walls.

## Architectural Engineering

### PRODUCTS

(Continued from page 240)

and a sheet of the photographic paper is placed over the area to be copied; the machine is then placed on top of the paper and an exposure is made by the press of a switch; the exposed sheet is placed in an envelope for developing at the user's convenience. Copies made by the machine are described as permanent, retaining clarity and legibility even after repeated handling. The copier is available in two models. The research model (specifications given above) will copy up to 8- by 10-in., including all the printed matter of a standard 8½- by 11-in. letter. The legal model (14½- by 9½- by 2¼-in., weight 7 lb) will copy the entire area of an 8½- by 11-in. letter or an 8½- by 14-in. legal form. A special carrying case is available at option. F. G. Ludwig Associates, Box 2983-35, New Haven 15, Conn.

### Furniture Showrooms

Among the many new showrooms that have recently been opened are three for the Dunbar Furniture Corporation and one for Herman Miller Furniture Company.

• *Dunbar's showrooms* are located in New York, Boston and Los Angeles, and have all been designed by Edward J. Wormley, Dunbar's designer. The New York Showroom comprises the entire sixth floor of 305 E. 63rd St. — triple the space formerly occupied in New York. An open plan has been used throughout, with special lighting treatment. The flooring consists of cork squares. Wall divisions are translucent materials, such as silk curtains and Japanese shoji screens.

The Boston showroom takes in the entire street floor, basement and mezzanine of the New England Mutual Life Insurance Bldg. at 92 Newbury Street. The main display area has cork floors, with a turquoise ceiling and white walls. The stairwell from basement to mezzanine is lined with imported grass cloth made of straw, oats and wheat. The fabric display and a collection of upholstered furniture is located on the

(Continued on page 250)



# For low-cost suspended ceilings... Fiberglas\* Ceiling Board

The distinctive beauty of Fiberglas Ceiling Board makes it ideal for large-area suspended ceilings. Flexibility of patterns and lighting units to conform with floor plan arrangements is an important feature. High acoustical value. Fire safe. Installation fast, low in cost. Many vital corollary advantages. For latest design data, contact your Fiberglas Acoustical Contractor, the nearest Fiberglas Branch Office, or write Owens-Corning Fiberglas Corporation, Dept. 67-C, Toledo 1, Ohio

OWENS-CORNING  
**FIBERGLAS**

## SOUND CONTROL PRODUCTS

FIBERGLAS TEXTURED, PERFORATED & SONOFACED\* ACOUSTICAL TILE  
FIBERGLAS TEXTURED & SONOFACED CEILING BOARD • FIBERGLAS SONOCOR\*  
ACOUSTICAL PADS FOR METAL PAN • FIBERGLAS NOISE-STOP\* BAFFLES

Fiberglas (Reg. U. S. Pat. Off.) Sonofaced, Sonocor and Noise-Stop are trade-marks of Owens-Corning Fiberglas Corporation.

**lowest cost non-combustible acoustical materials available**

## PRODUCTS

(Continued from page 244)

mezzanine, overlooking the main area.

Dunbar's space in Los Angeles occupies an entire, single-story building, with an adequate parking lot for customers and their clients. Contemporary in design, the front wall is constructed completely of glass — relieved by sunken gardens with dramatic plantings. The



Dunbar's Boston showroom, left, has air of simplicity and elegance. Herman Miller's showroom in Los Angeles, right, uses plants and wrought iron as decorative keynotes



3/4" CLIP  
With patented  
pressure-flange  
for extra rigidity.

**\* Securitee  
SYSTEMS**

SUSPENSION TEE  
10'-0" lengths,  
5/8" or 3/4" web  
with 7/8" flange,  
24 gauge rust-  
resistant steel.

The Quality  
Suspension  
system for the  
installation of  
acoustical units

**W. J. HAERTEL & CO.**  
832 West Eastman Street • Chicago 22, Illinois  
West Coast Distributor: **FREY & HAERTEL** 125 Barneveld Avenue San Francisco 24, Calif.

\*T. M. REG. U. S. PAT. OFF.

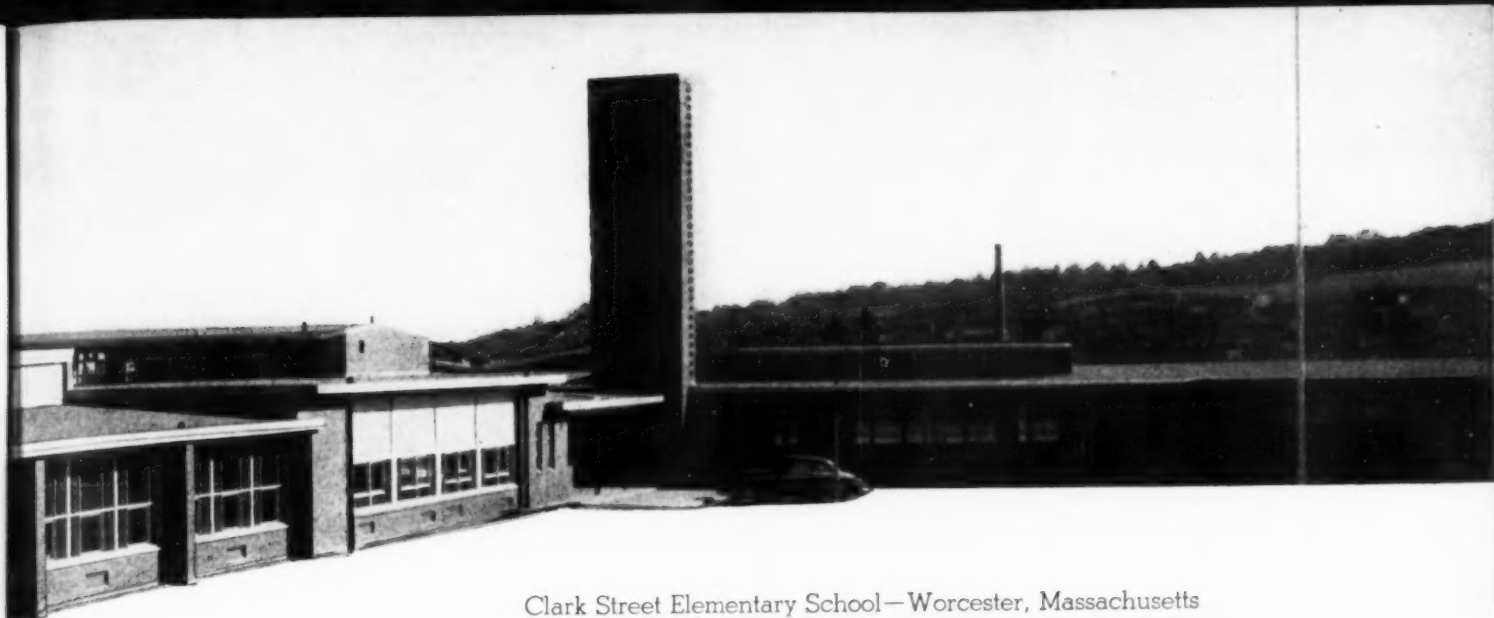
other three exteriors are of natural stucco and redwood. The address is West Third at Robertson.

• Charles Eames was the designer for the newly remodeled Los Angeles showroom for the *Herman Miller Furniture Co.* and has used several unusual background treatments. One of these consisted of papering one wall with all 116 pages of the manufacturer's complete catalog. A square canopy made of Herman Miller fabrics has been hung over a metal and plastic furniture grouping, suggestive of the outdoors. East Indian paper kites add color, and a dramatic effect is created by a large planting bed in the center of the showroom. Seven-ft wide floor-to-ceiling panels of the fabric collection are used as space dividers for the furniture groupings throughout the showroom. A separate fabric room has been provided for the convenience of architects and decorators. The showroom is located at 8806 Beverly Blvd., Los Angeles.

### New Carpets

Cotton, wool and rayon play important roles in *Bigelow-Sanford's 1953 Spring Line*, consisting of 36 new styles and colorings. Including patterns suited to provincial, traditional or contemporary decor, the line consists of geometric patterns, leaf motifs, florals and scrolls with a dimensional effect. Among the designs are: County Fair, a random-looped texture of varied colors; Chapel Hill, which is a modern-leaf texture with two pile levels and a traditional floral with two-level scroll ground; Southampton, a luxurious cutpile Loktuft cotton carpet; Siboney, a loop-pile Wilton with swirl-scroll texture and many others. Gold, gray, cinnamon, green and beige are but few of the many available colors — in solids or in combinations. Bigelow-Sanford Carpet Co., Inc., 140 Madison Ave., New York 16, N. Y.

(Continued on page 254)



Clark Street Elementary School—Worcester, Massachusetts  
Associated Architects: L. W. Briggs Associates, Worcester, Mass.,  
Perkins & Will, Chicago, Ill.

# for specifying roof insulation!



**3. Cuts Cleanly and Easily.** Next time you're out on a job, see how quickly and easily the roofer cuts Insulite. If you have time, talk with him . . . chances are he'll tell you that cutting ease is one of the reasons he likes to work with Insulite Roof Insulation.



**4. Durability.** Here's a sample taken from an Insulite roof applied in 1928. Tests show that after a quarter-century of service, the physical properties of this sample still exceed Federal specifications! Your Insulite representative has a sample like this. Ask to see it.

INSULITE, INSULITE AND GRAYLITE ARE REG. T.M. U.S. PAT. OFF.

**Build and insulate with double-duty**

# INSULITE



INSULITE DIVISION,  
Minnesota and Ontario Paper Company,  
Minneapolis 2, Minnesota

Made of hardy Northern wood





## PRODUCTS

(Continued from page 250)

**Bantam Calculating Device**

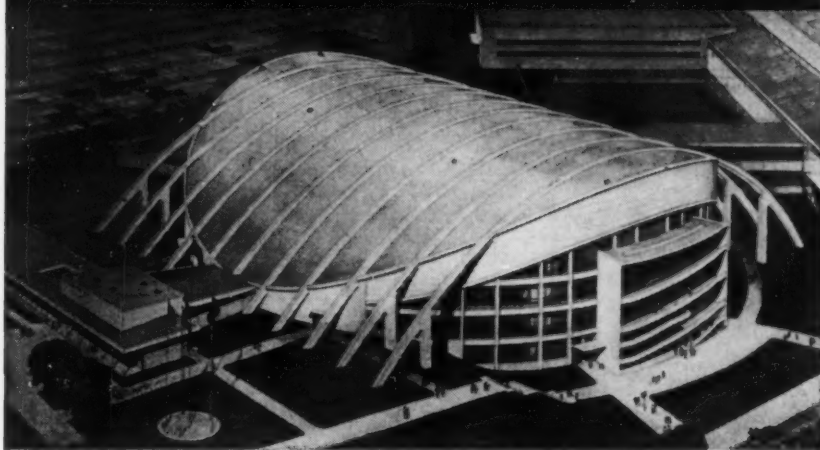
The Curta Bantam *Magic Brain* Calculator, although small enough to hold in the hand and weighing but 8 oz, is reported to combine the versatility of a large desk calculator with the portability of a slide rule. Manufactured abroad by German and Swiss technicians, the



Miniature calculator weighs only 8 ounces

calculator adds, subtracts, multiplies, divides, cubes and gives square roots. Recommended for invoicing, figuring interest, weight and measure conversions, cost accounting, allocating, and research in engineering computations, the calculator comes in a special shock-proof metal container, complete with full instructions. Curta Calculator Co., 3851 W. Madison St., Chicago 24, Ill.

## SEAPORCEL... CROWNING GLORY FOR THE LARGEST INDOOR RODEO ARENA IN AMERICA



**GENERAL CONTRACTORS** J. A. Jones Construction Co., Atlanta, Ga. Butler & Cobbs, Montgomery, Ala.  
**ARCHITECTS & ENGINEERS** Sherlock, Smith & Adams, Inc. Montgomery, Ala.

### THE LIVESTOCK COLOSSEUM

**BEING ERECTED BY THE STATE OF ALABAMA BUILDING COMMISSION  
FOR AGRICULTURAL, INDUSTRIAL, EDUCATIONAL & EXPOSITIONAL USE**

This 260 ft. x 130 ft. oval colosseum is crowned by 16,000 sq. ft. of SEAPORCEL (*Leathorcel Finish*) architectural porcelain enameled wall panels. In beautiful soft green, the *Leathorcel* texture harmonizes with the rest of this striking structure. Installed by Seaporcel's own erection crews the porcelain panels are backed by a one inch insulating material for sound insulation.

Here is a *truly* permanent facing material of *lasting* beauty!

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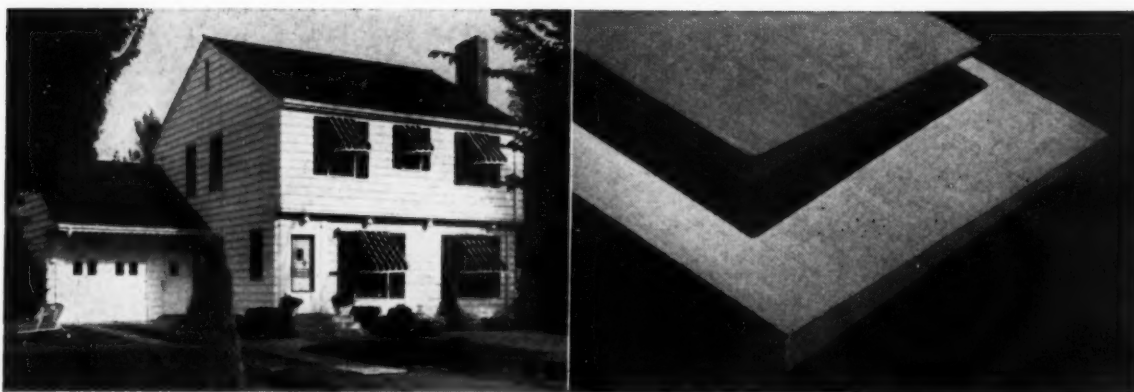
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• The Aluminum Association has elected D. A. Rhoades of the Kaiser Aluminum and Chemical Corporation of Oakland, Calif., its president for the ensuing year. Three vice presidents and three directors-at-large were also elected. The new vice presidents are: S. D. Den Uyl (Bohn Aluminum & Brass Corp., Detroit); Raymond Deutsch (Monarch Aluminum Manufacturing Co., Cleveland); and R. P. Stranahan (Stranahan Foil Co., Inc., South Hackensack, N. J.). Elected directors-at-large for three-year terms were: R. A. Blanchard (Detroit Fasket and Manufacturing Co., Detroit); A. P. Cochran (Cochran Foil Co., Louisville), the Association's outgoing president; and R. G. Tessendorf (Aluminum Industries, Inc., Cincinnati). A. V. Davis (Aluminum Company of America, New York) was re-elected chairman of the board, and Donald M. White was reappointed secretary and treasurer.

• The Western Pine Association has elected U. R. Armstrong of Winchester, Idaho, its president. Mr. Armstrong is production vice president of the Halleck & Howard Lumber Company's Winchester mill. Two new vice presidents of the Association were also selected. They are George L. Barkhurst (Michigan River Timber Co., Laramie, Wyo.) and A. B. Hood (Ralph L. Smith Lumber Co., Redding, Calif.). C. T. Gray (Stockton Box Co., Stockton, Calif.) was re-elected treasurer.

• T. W. Bruner, president of Bruner Corporation, Milwaukee, has been elected president of the Water Conditioning Foundation. A. K. Rheem, Jr. (Rheem Manufacturing Co., Chicago) was elected vice president, and John C. Hosford of Chicago was elected executive secretary and treasurer.



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**IN A VARIETY OF GRADES AND SPECIES**

Known for generations as a manufacturer of quality lumber products, Weyerhaeuser has developed the production of bevel and bungalow sidings to a fine art.

Weyerhaeuser Bevel and Bungalow Sidings are among the building industry's most popular exterior wall coverings. Their bevel design provides an overlapping, water-shedding pattern which increases their value as an exposure material. Offered in a variety of durable Western Softwoods, Weyerhaeuser 4-Square Bevel and Bungalow Sidings are proved, weather-resistant products.

In addition to their high functional value, bevel and bungalow sidings are easily adaptable to many styles of architectural design. They highlight the structural mass with form, texture and color. The deep shadow lines amplify the width, which is the most striking characteristic of rambler houses. The decorative schemes of homes built with Weyerhaeuser 4-Square Bevel and Bungalow Sidings are easily altered with each new paint job.

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## Architectural Engineering

### LITERATURE

(Continued from page 198)

Lites," wiring and mounting units, and lighting accessories all have separate sections devoted to them with photographs, specifications and mounting details. 38 pp., illus. Swivelier Company, Inc., 30 Irving Place, New York 3, N. Y.

6. *Fullon Architectural Aluminum: Doors, Frames, Entrances.* Narrow stile entrances, stock door units and stock glass door frames are featured in this easy-to-read catalog. Photographs of typical commercial installations, as well as of the doors themselves, make up the booklet, except for four tables and some drawings. Variety Manufacturing & Engineering Co., 810 W. Fulton St., Chicago 7, Ill.

7. *Penco Adjustable, Interchangeable Steel Shelving.* Brochure describes and pictures open and closed shelving in plain or ledge type units, and in combinations of both. Flexibility of shelving is pointed up, in addition to self-supporting qualities and adjustability on 1 in. centers. Specifications, a parts section and two pages on small parts units complete the catalog. Penn Metal Corporation of Penna., Oregon Ave. & Swanson St., Philadelphia 48, Pa.\*

### Laundry Equipment

*Troy Laundry Machinery (General Catalog YG-8-52).* Booklet gives descriptions, photos and specifications for washers, extractors, tumblers, presses, ironers, folders and accessories used in commercial laundries. 23 pp., illus. Troy Laundry Machinery, Div. of American Machine and Metals, Inc., East Moline, Ill.

### Laminations and Stampings

*Allegheny Ludlum Transformer Laminations (EM 3, Fifth Ed.).* Complete catalog of available standard lamination shapes includes full size drawings, technical information. Magnetic core materials are described, as well as magnetic shield fabricating facilities. 123 pp. Allegheny Ludlum Steel Corp., 2020 Oliver Building, Pittsburgh 22, Pa.\*

(Continued on page 204)



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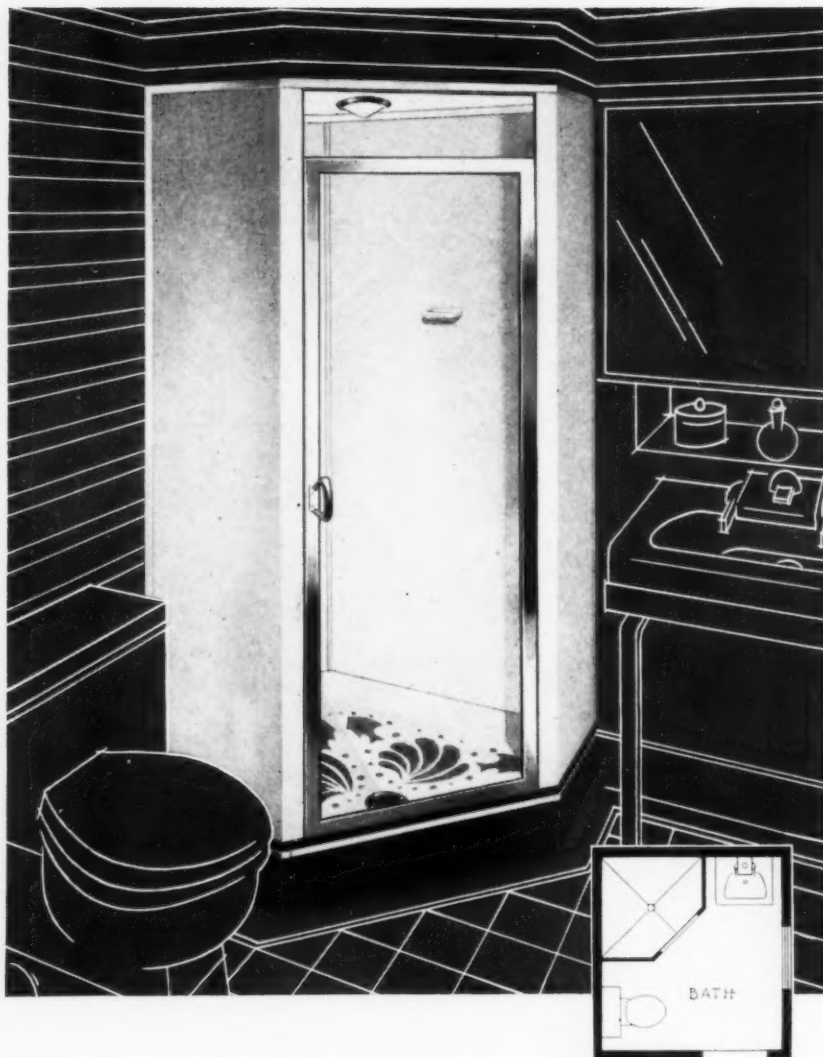
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HENRY WEIS MFG. CO., INC., 503 Weisway Building, Elkhart, Indiana

## Architectural Engineering

### LITERATURE

(Continued from page 258)

#### Tubing for Prestressed Concrete

*Aeroflex Plastic Tubing for Prestressed Concrete.* Folder gives specifications and information about bond preventing split tubing used over wire rope or rods in post tensioned beams. Method of applying tubing and a list of some of the sizes is also included. 3 pp., illus. Anchor Plastics Company, Inc., 36-36 36th St., Long Island City 6, N. Y.

#### Air Diffusers

*Anemostat Draftless Aspirating Air Diffusers (Selection Manual 45, 1953).* This third revision of the standard Anemostat manual features a new section on duct take-off design and a selec-



tion guide for various types of air diffusers. Tables and specifications are also included. Requests for catalog should be made on firm letterhead only. 64 pp., illus. Anemostat Corporation of America, 10 E. 39th St., New York, N. Y.\*

#### Ceiling Diffusers

*Carnes Ceiling Outlets.* Folder pictures and describes briefly the manufacturer's line of ceiling diffusers and diffuser accessories. 3 pp., illus. W. R. Carnes Co., Verona, Wis.

#### Vinyl Tile

*Vinylast Plastic Floor and Wall Tile.* Folder gives characteristics, colors and sizes of standard vinyl floor and wall tile of the manufacturer. Uses and applications are suggested. Newly developed static-conductive tile is described briefly. 3 pp., illus. Vinyl Plastics, Inc., Sheboygan, Wis.

(Continued on page 266)

plan an  
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in natural birch  
with  
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cabinets

Kitchen and laundry—or kitchen and breakfast nook—can be on intimate terms when you choose one of the *new* Curtis kitchens. Woman-designed, these smart, flush-faced wood cabinets embody 53 beauty and convenience features which women want. Available either in natural birch or finish-coated in white, ready for decoration, they offer you almost unlimited planning flexibility for any size or shape of kitchen. Hardware is furnished and hinges applied.



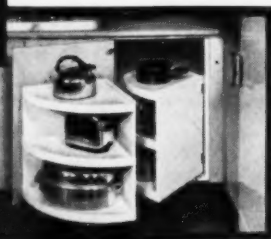
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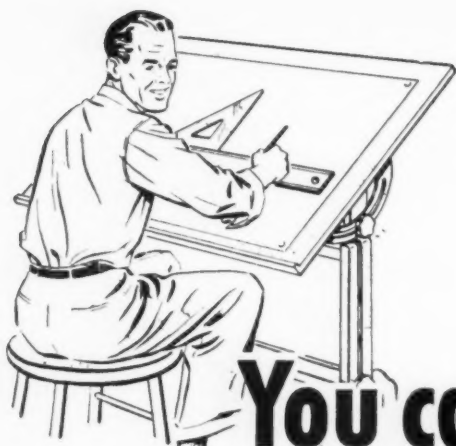
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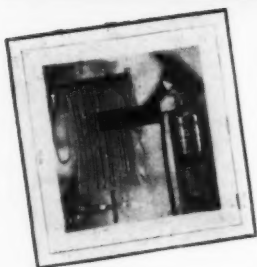
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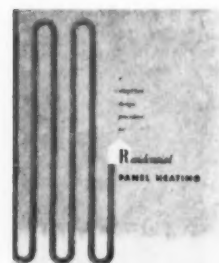
## Architectural Engineering

### LITERATURE

(Continued from page 264)

#### *A Design Procedure for Panel Heating*

*Residential Panel Heating.* Booklet features a method of determining size of panel and water temperature necessary to heat a room in the average residence. This method is said to eliminate the need for making heat loss calculations. Both insulated and uninsulated structures are dealt with; tables and installation details are given. 27 pp., illus. Revere Copper and Brass Inc., 230 Park Ave., New York 17, N. Y.\*



#### *Curing Concrete*

*Hunt Process Concrete Curing Compounds.* Folder describes curing methods and spray equipment for four types of the manufacturer's curing compounds, including a clear formula which retains natural color of concrete and a pigmented one (white and gray) which controls temperature by giving a heat reflecting film. Other compounds are the manufacturer's "tilt-up" for precast construction and black which is recommended for waterproofing. 7 pp., illus. Hunt Process Co., Inc., 7012 Stanford Ave., Los Angeles 1, Calif.

(Continued on page 270)

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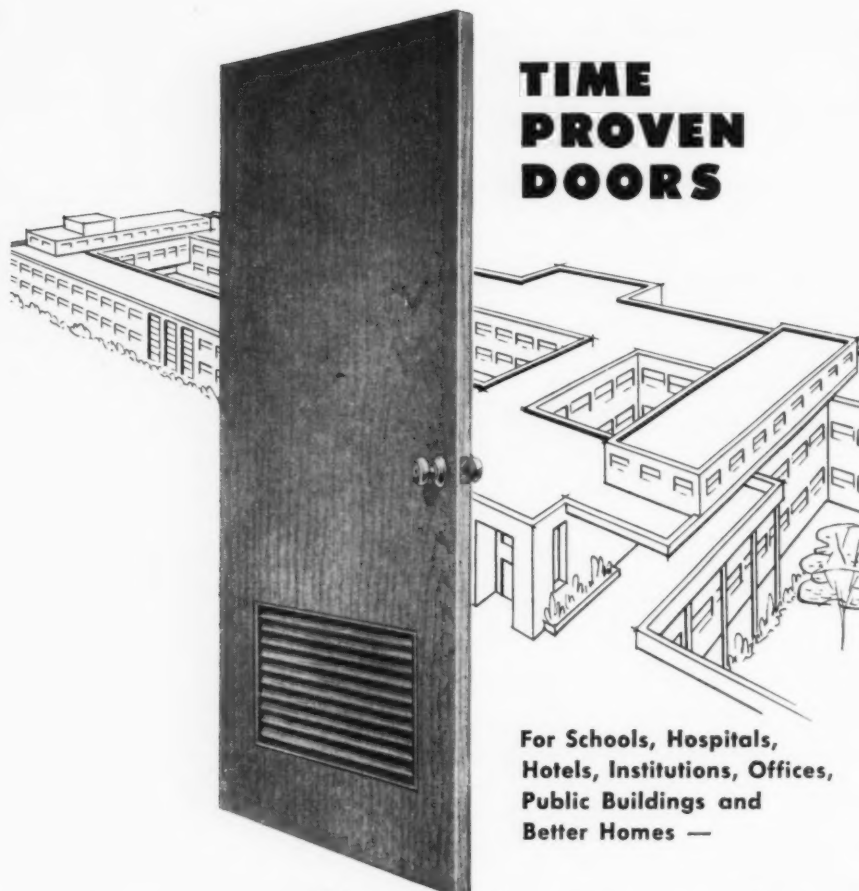


WWP13  
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Compartment  
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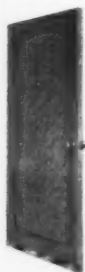
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## Architectural Engineering

### LITERATURE

(Continued from page 266)

#### Light Steel Structural Sections

*Penmetal Lightsteel Structural Sections*. Catalog contains tables, drawings, photographs and specifications of newly developed sections for low cost, light weight steel frameworks for smaller



buildings. Full range of products in the line are pictured and framing details are also given. 12 pp., illus. Penn Metal Company, Inc., 205 E. 42nd St., New York 17, N. Y.\*

#### Soil Pipe Fittings

*Somerville Iron Works (Catalog R)*. New catalog covers entire line of the manufacturer's cast iron soil pipe and fittings and plumbers' specialties. Indexed, divided into sections and well illustrated, this would seem to be as complete a piece of literature as can be found on the subject — a veritable file in itself. 96 pp., illus. Somerville Iron Works, Division of Johnson Bronze Company, Somerville, N. J.

#### High Fidelity Sound Systems

*The Regency (Bul. 185) and The Aristocrat (Bul. 189)* are two new brochures on *Electro-Voice* high fidelity sound system enclosures. Detailed data is given on the individual coaxial speakers, high frequency and low frequency drivers, diffraction horns and crossovers, and on complete speaker systems for these cabinets. Included in the brochures is information on response, impedance, efficiency and distortion data. A comprehensive table indicates various changer, amplifier and tuner combinations. Each 8 pp., illus. Electro-Voice, Inc., Buchanan, Mich.

(Continued on page 274)



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- 1st Windows
- 1st Wood

Note: the above classifications are standard in Sweet's Architectural File with two exceptions: (1) a "Miscellaneous" classification is included to cover a variety of products and services accounting for a combined total of 37 pages in all three magazines, (2) an "Office supplies" classification has been added.

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Evanston Congregation Hillel Building, Northwestern University, Evanston, Illinois. First presented to architects and engineers in Architectural Record. Architects: Harrison & Abramovitz . . . Photographer: Hedrich-Blessing

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File 25c WO for com-  
plete details and  
specifications.

**Architectural Engineering**

**LITERATURE**

(Continued from page 270)

**Selection and Application  
of Heating Equipment**

*Dunham Handbook on Heating.* New edition of this desk reference book, first published in 1922, covers selection application and installation features of radiation, unit heaters, vacuum and condensate pumps, heating specialties and complete heating systems. Accompanying the definitions and advantages of the various types of heating are line drawings, graphs, tables and photographs, covering parts, data on installation, equipment, etc. Miscellaneous data includes temperature conversion formula, decimal equivalents of fractions, equivalents of electrical units, number of U. S. gallons in round and rectangular tanks and weights of sheet steel. 400 pp., illus. Architects may obtain the book for \$2.50 by writing on their letterheads. C. A. Dunham Co., Chicago Daily News Bldg., 400 W. Madison St., Chicago 6, Ill.\*

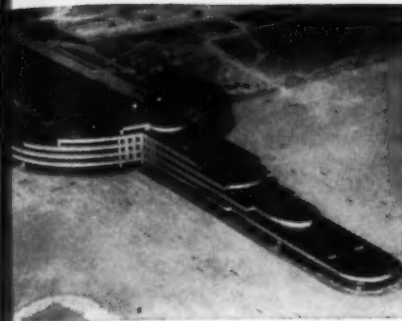
**Carpeting**

*Goodall Fabrics Seamloc Carpeting.* Brochure contains four 3 by 5-in. samples of as many of the manufacturer's carpets, including "Luxuria," "Sampson," "Araby," and "Casual Loop." Each sample is shown in a different color, and a full color reprint included in the brochure illustrates a full range of 22 colors, in which these weaves are available. The brochure also furnishes a list of distributors. Goodall Fabrics, Inc., Carpet Contract Div., 525 Madison Ave., New York 22 N. Y.

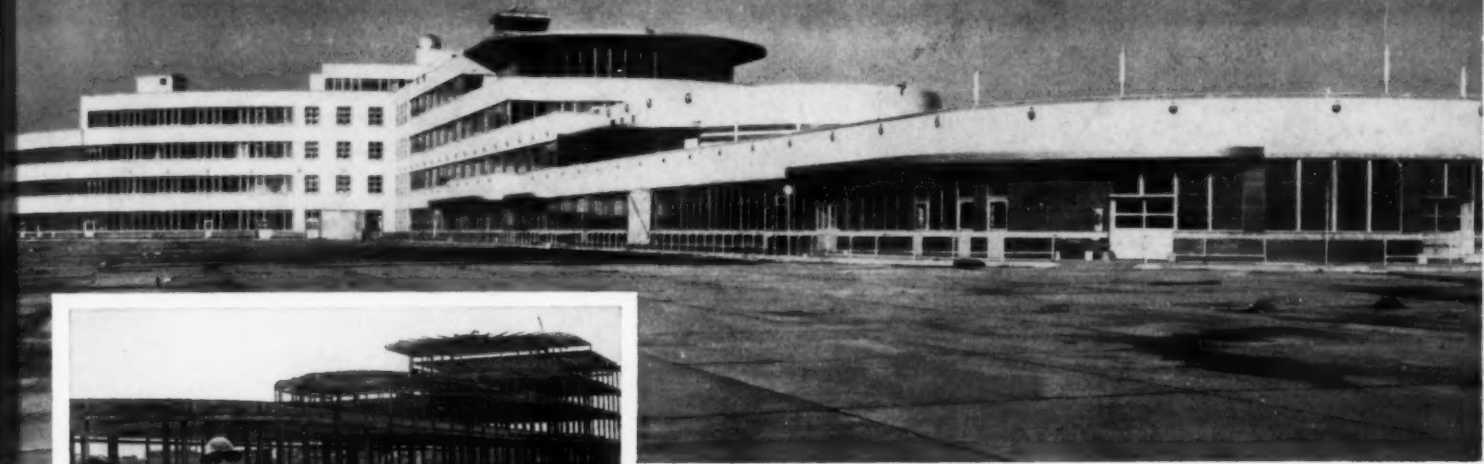
**White Marble Roofing  
Aggregates**

*Whitelop Research Data.* Well-organized booklet discusses the phases of built-up roofing with white marble as aggregate and includes 12 graphs which show results of roof exposure tests. Then, to facilitate comprehension of the total and comparative results pictured on the curves, a table follows, together with formulated conclusions. 15 pp., illus. Calcium Products Division, The Georgia Marble Co., Tate, Ga.

(Continued on page 278)



# Huge Terminal Building at World's 2nd Largest Airport *By* **AMERICAN BRIDGE**



**4,000-Ton steel framework fabricated and erected for 460-ft. semi-circular 7-story Administration Bldg. and 578-ft. Loading Dock**

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## Interesting Facts

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Terminal Building is Largest in World.

The terminal building provides facilities of a small city, including a 62-room hotel, a restaurant to accommodate 3000, numerous shops.

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Owner and Operator: Allegheny County Department of Aviation.

Architect: Joseph Hoover, Pittsburgh.

Consulting Engineer: L. W. Cook, Pittsburgh.

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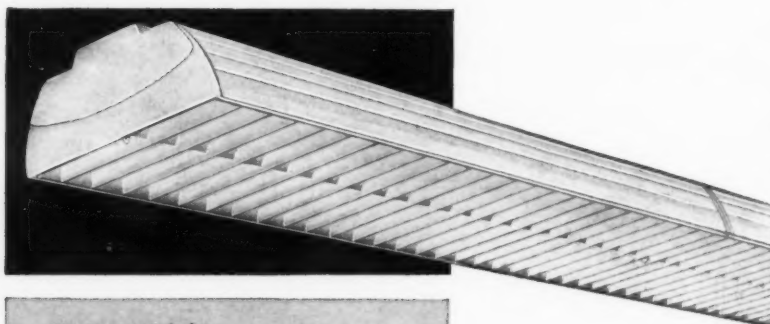
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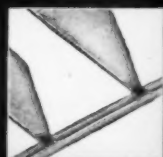


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**Architectural Engineering**

**LITERATURE**

(Continued from page 274)

**Canvas to Control Solar Heat**

*Canvas in Contemporary Architecture.* Folder provides architect with data on canvas as a practical, economical solution to solar heat control, as well as other climate control problems. Approach takes into account architectural preference for custom designing, so information mainly suggests possibilities of canvas in field of design. 3 pp., illus. Canvas Awning Institute, Inc., P. O. Box 1851, Memphis 1, Tenn.



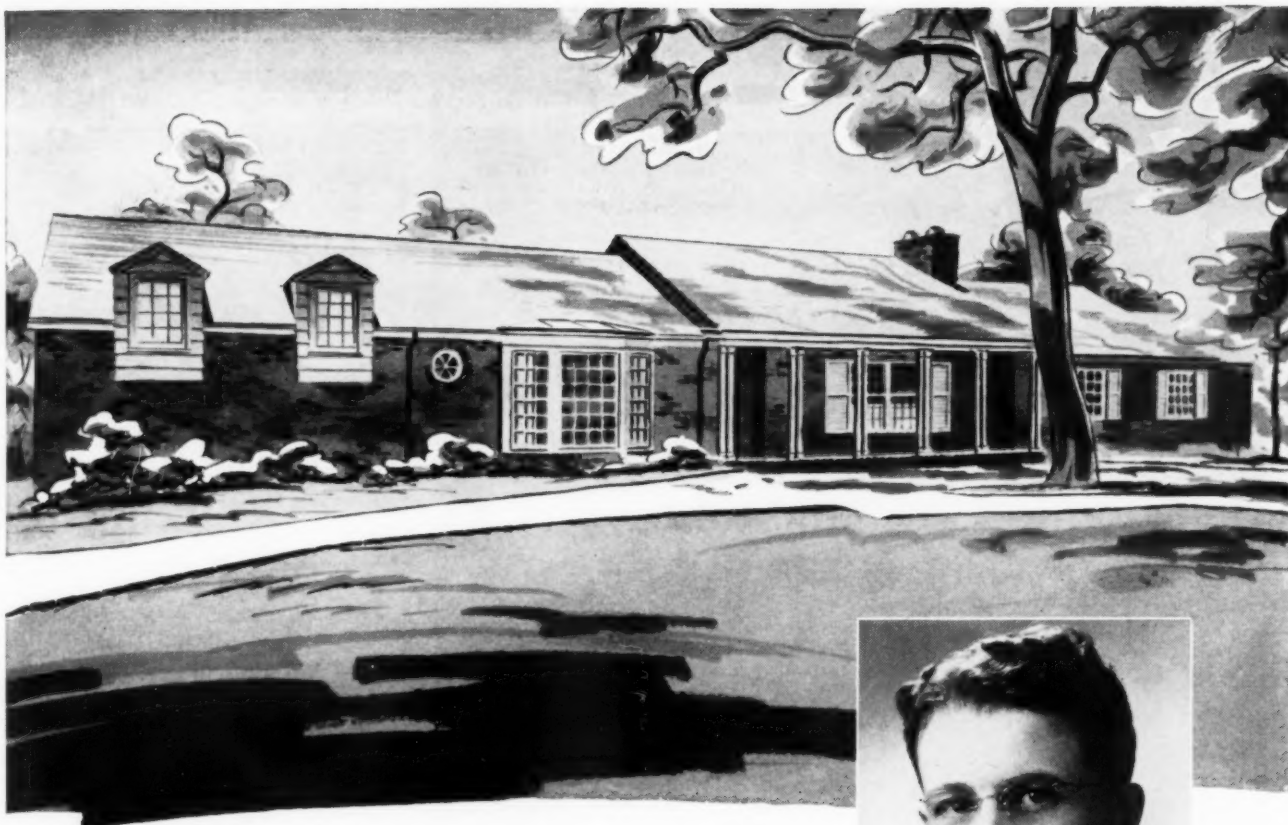
**Steam Accumulator**

*Foster Wheeler Steam Accumulator.* Here the principle behind steam accumulators is explained, as well as practical applications. Method for calculating capacity of accumulators and advantages of using the system are given. Typical installations are in breweries; oil and sugar refineries; forge, rubber and tobacco plants; textile and pulp mills; gas generation; food processing and plate glass factories. 8 pp., illus. Foster Wheeler Corp., 165 Broadway, New York 6, N. Y.

**Adjustable Steel Framing**

*Flexa Steel Channels and Fittings (Catalog No. 153).* Brochure contains dimensional drawings of all parts in the Flexa line of metal framing, including stand-

(Continued on page 282)



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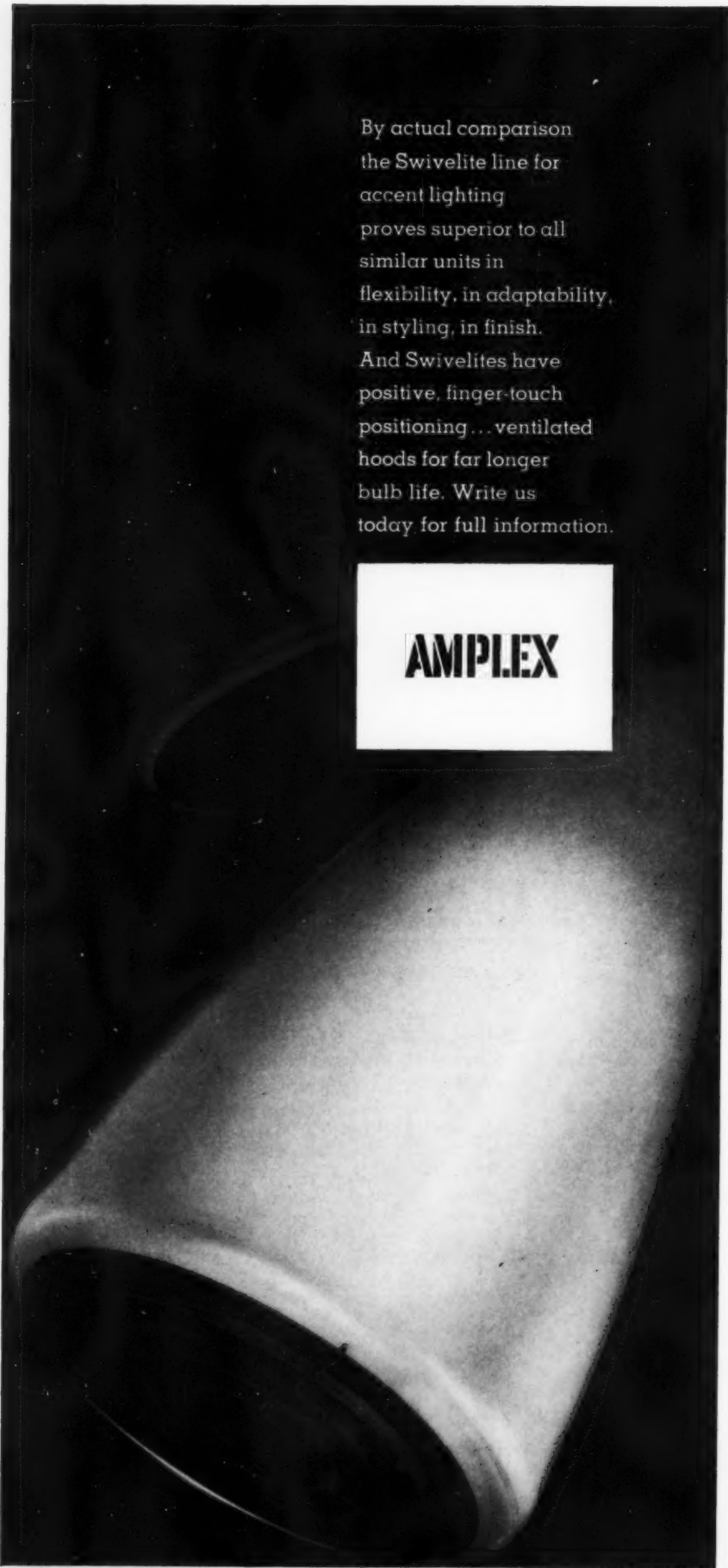
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## Architectural Engineering

### LITERATURE

(Continued from page 278)

ard channels, nuts, fittings, hanging components, beam clamps, brackets and concrete inserts. 40 pp., illus. Flexa Steel Products, Inc., 1348-50 W. Washington Blvd., Chicago 7, Ill.

#### Radiant and Baseboard Heating

(1) *Kritzer Radiant Coils Design Manual No. 50-CE*; (2) *Kritzer Radiant Coils Engineering Bulletin No. 50-RE*; (3) *Kritzer Baseboard Heating*; (4) *Kritzer Fin-Pipe Coils*. Catalog No. 50-CE is result of the manufacturer's laboratory experiments and tests conducted to develop better methods for rating all types of finned tube radiation and to determine actual unit capacities. Introduction, tables and specifications are included. Booklet No. 50-RE features practical information about the use of coils in radiant panel heating. Design of the system is discussed in detail for the first few pages, while graphs, tables and installation instructions make up the greater part of the catalog. Brochure on baseboard heating presents five lines of models which are said to suit all usual requirements for baseboard heating. Specifications and installation instructions are included. Coils, covers and accessories are given straight-forward, simple treatment in this booklet and supplementary pages available from the manufacturer on fin-pipe coils. For greater detail, see Design Manual 50-CE aforementioned. 70 pp., 66 tables; 24 pp., illus.; 16 pp., illus.; 8 pp., illus. Kritzer Radiant Coils, Inc., 2901 W. Lawrence Ave., Chicago 25, Ill.

#### LITERATURE REQUESTED

The following individuals and firms request manufacturers' literature:

George A. Allgoever, Architect, 300 Reading Ave., West Reading, Pa.

Donald J. Haulman, Student, 964 Essex St., San Luis Obispo, Calif.

Alexander R. James, Architect, 10 Mechanic St., Keene 520-W, Keene, N. H.

Robert H. McCarty, Jr., Architect, 1124 Falls Building, Memphis 3, Tenn.

Raymond E. Nordquist, Architect, 512½ Ave. G, Billings, Mont.

Marvin L. Thomas, Architect, 1910 Arnold, Topeka, Kan.





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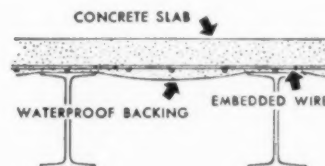
When architect J. Robert F. Swanson and his staff at Swanson Associates in Bloomfield Hills, Michigan, set out to design the splendid new Birmingham, Michigan, Senior High School, they did far more than simply construct a handsome structure to house a specified number of students. For two years they joined in study with Birmingham school officials to exactly determine local educational philosophy and objectives, and crystalized their thinking with an on-the-spot survey of the best school facilities throughout the free world. The result was a low, wide-spread campus-type of structure, requiring many thousands of feet of concrete decks.

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**Note,** in the cross-section and close-up that the weight of the wet concrete forces the backing away, which permits the galvanized welded wire mesh to assume its proper position in the slab. Steeltex Floor Lath also performs two other functions. It permits work on the floor below while pouring is in progress and retains moisture to assist proper curing.



## Pittsburgh Steel Products Company

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## THE THREE LAMPS OF MODERN ARCHITECTURE

BY JOSEPH V. HUDNUT

(Continued from page 126)

embody, actually defiant of the laws of gravitation, which approaches His throne; and the great illogical towers, masking completely all factual circumstance in the fabric behind them, triumphantly possess the splendor of His heaven.

The eloquence of these expressions arises from ideas which, originating in the mind, are objectified in external patterns, endowing these with moving

qualities independent of fact and logic. The origin of the idea, its translation into visible shapes, and the apprehension of these shapes as avenues of feeling — all these, the basic processes of art, are uncalculated, immediate, and unimpeded by scientific law.

I have in effect outlined a philosophy of architecture which finds the law of architecture in the realm of art and which does not obscure with scientific

values the values of art. I did not mean to speak as an oracle. I have stated, in these two first papers, some principles which seem to me to be valid. I should now like to re-examine in the light of these principles the doctrine of organic expression.

It must be evident, in the first place, that the artist's way of working — as I have described it — is not nature's way of working. We do not know how nature works; how trees are developed from acorns, continents from the seas; but we have no reason to believe that in the course of these progressions nature has ideas or feelings. Art is a conscious activity. There is in art always the factor of intention, of known direction and objective. Except in the imagination of a poet a tree does not begin as a program in the mind of nature.

It must be evident, in the second place, that the function of order in art — whatever may be the principle of order — is different from the function of order in nature. We do not know why nature creates order; why planets turn around the sun or why the snail's shell is given so perfect a symmetry; but we may be sure that this order is not addressed to man. The artist alone speaks to us, to whom nature is indifferent.

In the third place, we do not apprehend order in works of art in the same way that we apprehend order in works of nature. The artistry of nature exhibits, as works of art often do, the facts of structure and purpose but — except as we project these upon natural objects — this artistry does not reward us with an apprehension of idea or feeling. We become aware of nature's order through analysis and deduction; we are filled with wonder at the multiplicities of nature's orderings; we find them beautiful. Nevertheless, that beauty is not, except by analogy, the beauty we discover in human life. It is not the beauty which reveals the spirit of man.

It may be said that, in making these comments, I have removed man from nature. I did not intend so catastrophic a divorce. I assume that man's home is in nature, that his "blood is sea-water and his tears are salt . . . and of stuff like his bones are corals made." I assume that biological and physical laws are of the first importance to his mental conclusions; and if I believe that there exists a reality not comprised in nature I have, like Laplace, no need of that hypothesis at present. What I have been trying to make clear is merely this: that nature in her thousand acts of creation

(Continued on page 288)

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## THE THREE LAMPS OF MODERN ARCHITECTURE

BY JOSEPH V. HUDNUT

(Continued from page 286)

makes use of man in ways peculiar to himself. When nature builds a city, or invents a radio or a philosophy, or writes a poem or a sonata, she does this through a special agency which, for good or evil, is conditioned by its own laws.

We may believe with Emerson — and with Louis Sullivan — that there is in nature a creative force: a conclusion difficult to avoid if we accept the doctrine of a continual progress toward human

betterment. We must be careful not to endow this creative force with attributes such as compassion, wisdom, or reason, since to do so would bring us perilously near to religion; but we may speak of the inscrutable logic of mountains, forests, and seas and of that symphony in which the world and all things created by man are brought into harmony by a universal energy, ever active and benevolent.

In terms more poetic than philosoph-

ical, and therefore more persuasive, this concept of a creative force active in nature and in man was stated — and more than once — by Emerson; and it was Emerson who kindled the fire that burns in the *Kindergarten Chats* of Louis Sullivan:

"Things are so strictly related, that according to the skill of the eye, from any one object the parts and property of any other may be predicted. If we had eyes to see it, a bit of stone from the city wall would certify us of the necessity that man must exist as readily as the city. That identity makes us all one and reduces to nothing great intervals on our customary scale.

"We talk of deviations from natural life, as if artificial life were not also natural . . . If we consider how much we are nature's we need not be superstitious about towns as if that terrific or benefic force did not find us there also and fashion cities. Nature who made the mason, made the house."

Face to face with Michelangelo under the vaults of the Sistine Chapel, Louis Sullivan identified the creative force of nature with the creative impulse of genius. Genius is the supreme manifestation in human life of nature's elementary creativeness. Here was

"The man, the man of super-power, the glorified man, of whom he had dreamed in his childhood, of whom he had prophesied in his childhood as he watched his big strong men build stone walls, hew down trees, drive huge horses — his mighty men, his heroes, his demi-gods . . . Here was that great and glorious personality. Here was power as he had seen it in the prairies, in the open sky, in the great lake stretching like a floor towards the horizon, here was the power of the forest primeval. Here was the power of the open — of the free spirit of man striding abroad in the open."

This is assuredly a more welcome concept than that of a "peculiarity in the human constitution" which drove Michelangelo to cover the ceiling with his majestic pattern and which, centuries later, provokes in the tourist, Baedeker in hand, an appropriate esthetic emotion. Nevertheless, Michelangelo and the tourist did act in ways peculiar to themselves and not peculiar to the vast inanimate nature which surrounded them. The power of the open, of the forest primeval, whatever its provenance, operated within the free spirit of man. And

(Continued on page 290)

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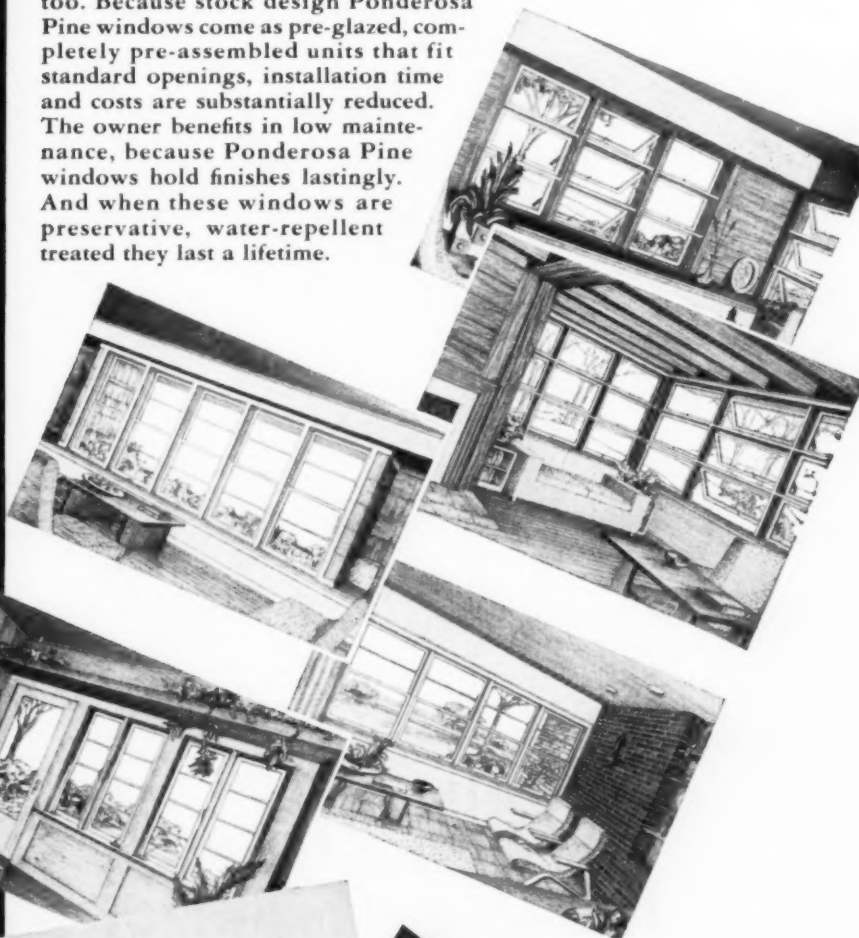
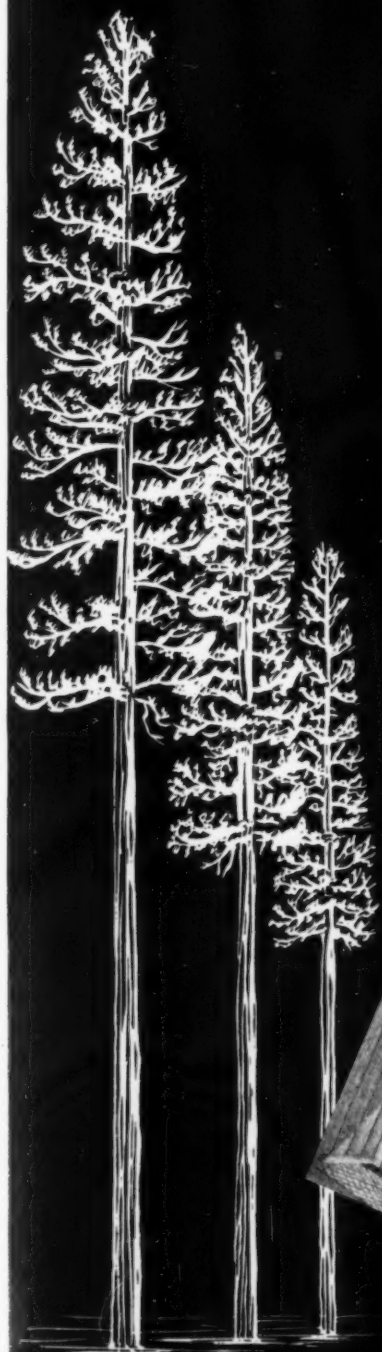


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## THE THREE LAMPS OF MODERN ARCHITECTURE

BY JOSEPH V. HUDNUT

(Continued from page 288)

Louis Sullivan does not tell us how this is possible until this power, existing in all nature, is first translated into human terms. And, if translated into human terms, shall we not find in the free spirit of man, rather than in the forest primeval, that which is specific to that human peculiarity which we call art?

The doctrine according to which an organic order of nature demands an organic expression in art leaves out of

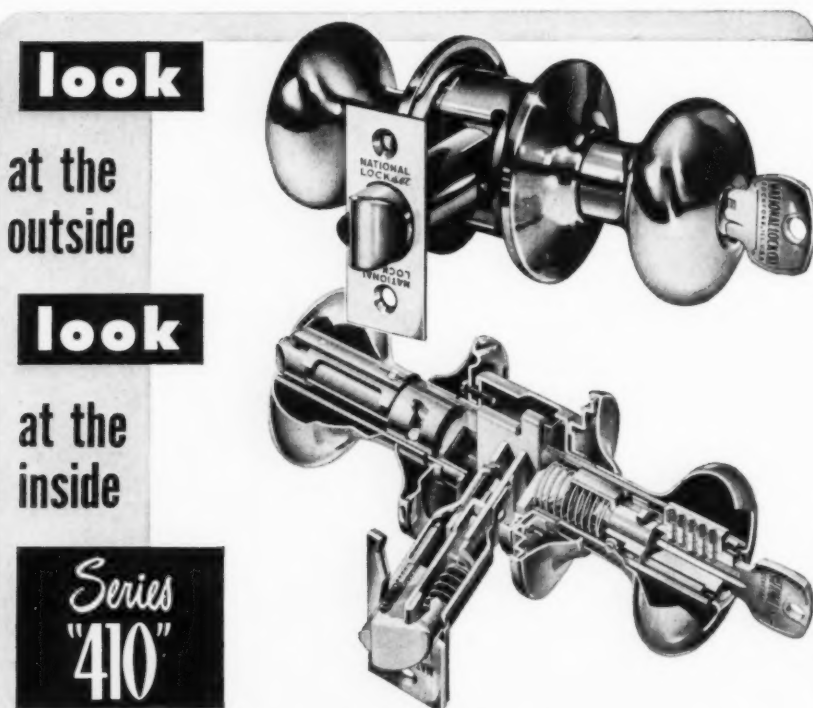
account this intervention of mind in the act of expression, this supremacy and exclusiveness of control and exercise. Objects of art, created in the mind, must submit to the laws of the mind even if these laws are created by evolutionary growth; and the fact that living creatures, such as animals and trees, have often structure and organs which can be compared to those of a man does not in any way demonstrate a similarity in the

origin and development of those things which pertain to the mind. Whatever may be the range and grandeur of nature's essential energy, this must assume many and strange diversities as it becomes effective in the million processes of creation. Nature practices not one artistry but many; and, although for all the products of her illimitable invention — mountains, acorns, the constitutions of republics, the illuminations of cities — her law is constant, yet for each she exercises that law in a specific mode, subject to circumstance and within definite boundaries. That would be true, even if mode and circumstance and boundary were themselves fashioned — as no doubt they are — by nature. A creative force quickening the world creates for itself many theaters within which, for purposes not known to us, it moves in rhythms harmonious to each theater. Among these is the theater of the mind.

The impulse to expression, although existing in nature and subject to nature's supreme laws, makes itself felt only in that narrow theater. Whatever may be its prime mover, whatever the experiences from which it derived its essential nature, it is there confined. Except in a universe lying beyond nature, there could not be an art of expression which originated in any other place; and whatever laws of nature may govern such expression, these must be transformed into a mode of operation consistent with the qualities of that uncertain enclave. Obviously, this mode of operation is psychological and, therefore, subject to physical and biological law only as these enter into and condition the general life and health of man. Physical and biological laws cannot exercise an immediate control over the processes of expression so long as this intermediary faculty exists to screen and purify their action and impose upon them conformities to its peculiar needs. Granted that the kingdom of the mind is limited, that it was created by a natural evolution, it is nevertheless sovereign within its own domain.

I must admit at this point that I have given a somewhat limited meaning to the word *expression*. Every one knows that natural objects — trees, mountains, wild animals — may become through association so closely knit to idea or feeling as to symbolize and even embody emotional qualities. Nature, who in works of fiction weeps or rejoices with every changing mood of the heroine, raises her mountains to receive and return our sentiment for eternity; and the wintry

(Continued on page 292)



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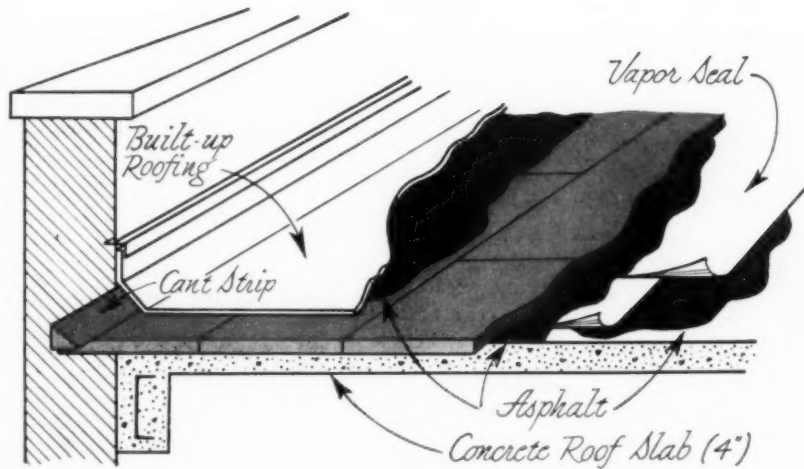
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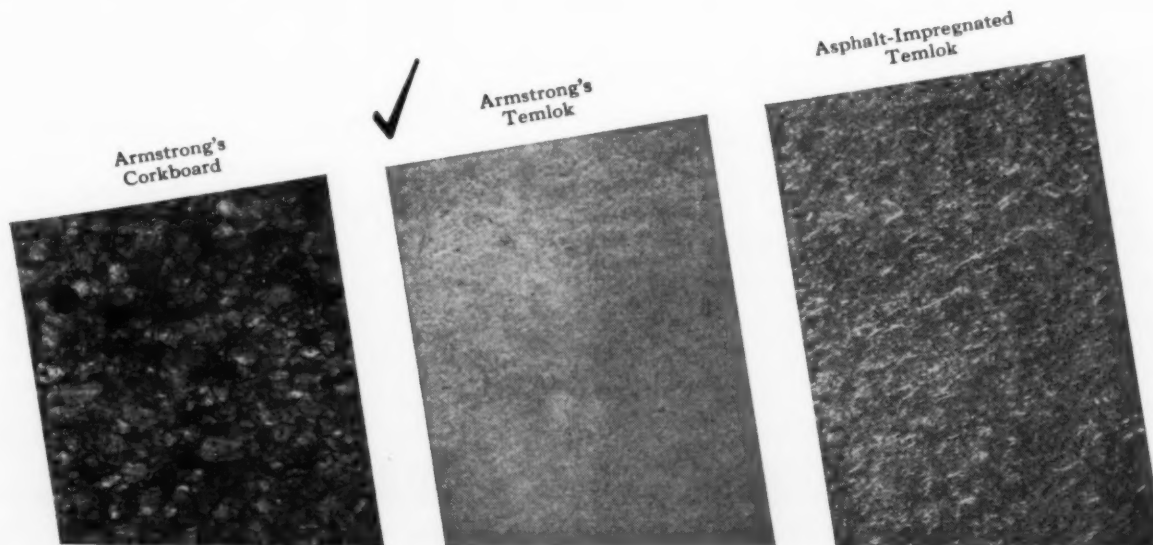
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## ARMSTRONG'S ROOF INSULATIONS



## THE THREE LAMPS OF MODERN ARCHITECTURE

BY JOSEPH V. HUDNUT

(Continued from page 290)

branches of forests reassure us of rebirth and immortality.

At such times it may happen that, our eyes directed by scientific habits of thought, we are aware that such virtues exist in objects and in living creatures integral with an organic structure of bone and limb and brain. When we see that the tiger is ferocious, the doe tender, the snake insinuous, and that each of these animals is an organic whole — the

form, willy-nilly, following every necessity of function — we are apt to forget the origin of those feelings which we alone have projected upon these creatures, and then we search in their organism for the hidden means by which these command our imaginations. But the emotional qualities of tiger, doe, and snake were evident before we knew anything about their structures, and such emotional qualities exist also in sunset,

sea, and wind which have no organisms whatever.

We say of a church, or a courthouse, or a prison: this building expresses its purpose. Unless we are speaking of symbols — of a spire, a dome, or a Norman keep imitated — we mean that its outward shape is derived from a structural or spatial pattern determined by practical considerations of function. Our building, then, like the tiger, the doe, and the snake, is explained to us, and we may search in that logic for the source of whatever feeling we may entertain for church, or courthouse, or prison. The essential physical features are revealed, we see that the building is fitted for its purpose, and we imagine that this fitness is the vehicle of an emotion. This is a delusion: the emotion was projected upon the object from our own consciousness.

There is a striking analogy between a house thus become a peg for our feeling and the objects represented in a painting. The house comprises its character in the same mode of knowledge as a Venus by Titian — that is to say, by representation; it is represented in our consciousness just as the tiger, the doe, and the snake might be represented, and it receives our sentiment in the same way. A fact is communicated; we are informed; and the information establishes a certain harmony of understanding which invites our interest and may move us. But that is quite a different phenomenon from expression.

It is true that representation is often an aid to expression as I have defined it — the objectification of idea and feeling in external objects — but only when that which is represented is subject to the reshaping of a conscious art. Although the expressive value of line, movements, colors, and sounds lies in their own characters — in themselves as abstractions — these may be imposed upon objects which have been first shaped by necessity. When these lines, movements, and colors are those of an animal represented in paint or in bronze, they become merged with fact. They embody feelings which arise from our experience with animals. The form of a lion would not be fearful if we did not know that a lion, among ladies, is a fearsome thing. And if we draw a lion, as the first men drew bulls on the walls of their caves, we are certain to search out and emphasize those shapes and proportions in the lions which convey our feeling. We have then a work of art, the appearance remolded by the mind.

(Continued on page 294)



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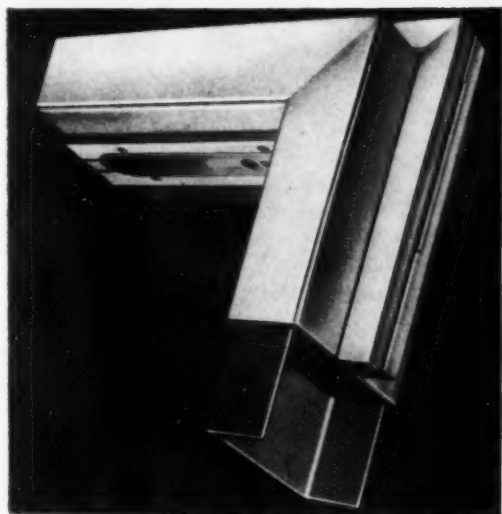
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## THE THREE LAMPS OF MODERN ARCHITECTURE

BY JOSEPH V. HUDNUT

(Continued from page 292)

In like manner it is only when the architect gives to structure and enclosed space—to nave and aisle, to halls of assembly and rooms for social intercourse, and to the fabric which surrounds these—the remoldings in shape, proportion, sequence, and development which inform functional space and structure with his own thought and sentiment that these become elements of expression. If, then, they may be the basis of

form also—so that internal space, structure surrounding space, and external shapes are parts of one pattern—their expression has gained a double validity, for they will be expressive not in themselves merely but in the building as a whole.

It is an arresting circumstance that until our time the exhibition of structure was, with rare exceptions, an end secondary to the achievement of form: of

form conceived not as factual relationship but as a unification and harmony of sensual elements. The attainment of such unification and harmony, when concerned with visible things, was the supreme métier of painter, sculptor, and architect. Whatever may have been his dependence upon physical law, whatever his compromises with necessity, it was this prescriptive and unique exercise which was the essential of the architect's way of working. And yet today when all the other parts of visual expression—painting, sculpture, music, and the dance—have triumphantly reaffirmed the supremacy of form over objective and representational truth, when the language of art is universally a protest against the tyrannies of science, only architects rejoice in a realism as rigorous—and as anatomical—as that of Bouguereau.

Because we were surfeited with the excesses of romantic architecture—and disgusted with the shallowness and pretense of eclectic practice—we turned as if by a common impulse to satisfactions more congenial to good sense and rationality. The passion of Louis Sullivan destroyed the despotisms of the styles, and the dialectic of Le Corbusier persuaded us of a new beauty in efficiency, in a candid devotion to truth, in the clarity and exquisite perfection of machine production, and in the excitements of his speculative daring. Both of these architects illumine their creeds with a lamp lighted in a philosophy of nature. They did not need that radiance for the architecture of both is kindled with the unreasoned eloquence of form.

That building is most perfect in which space, structure, and outward shapes are integrated into form: when they are fused, not by calculation or necessity but by the commanding spirit of an artist, into a comprehensive unity. I do not mean that factual shapes and relationships should not be evident. I mean that factual shapes and relationships must, wherever that is possible, be subordinate to felt relationships. I mean that the satisfactions of knowledge are less valuable than the satisfactions of art. I mean that we must value the artist in building and set him free from the tyrannies of a philosophy which, however valid in its own realm, is invalid in art.

"Nature and art," said Picasso, "being two different things cannot be the same thing. Through art we express our conception of what nature is not."

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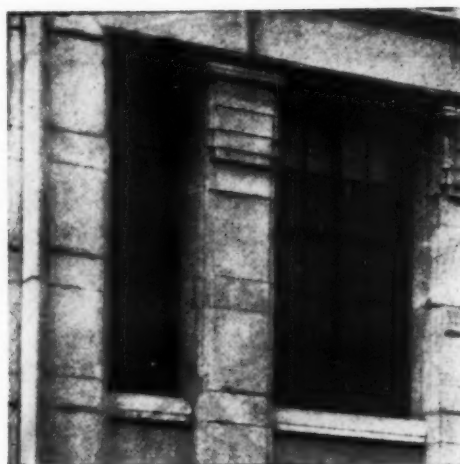
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## THE RECORD REPORTS

### WASHINGTON

(Continued from page 38)

### HOUSING POLICY HELD UP TILL COLE REVIEWS HHFA

It is still too early to tell what changes will be instituted at the Housing and Home Finance Agency by its new administrator, Albert M. Cole. It is safe only to say that no major upsets will occur until Mr. Cole has taken a "full, fresh look" at the entire operation.

So Mr. Cole himself summed up the outlook in a recent speech in New York before the Eastern Conference of the Mortgage Bankers Association of America. It was his first public address since he took over as housing chief.

Mr. Cole stressed that answers to the big questions of Federal housing policy as well as matters of HHFA setup must await the results of his current review. It is considered doubtful that any of Mr. Cole's recommendations could be formulated in time to pass through White House hands and get before Congress at this session—especially if Congress meets its early adjournment date in July as it now hopes to do.

### Home Builders Restive

Home builders had begun to express concern that too long a delay in Congressional consideration of a new housing program for the nation might seriously affect their operations.

As John M. Dickerman, executive director of the National Association of Home Builders, put it: "In the list of things which must be done, housing still draws a rather low priority number. In the minds of Administration officials and the Congress, the home building segment of our economy is making good progress. Total starts continue to maintain high levels. All of this . . . has combined to delay serious consideration of an overall housing program for 1953."

But, continued Mr. Dickerman, "early enactment of legislation to modernize our financing tools" is necessary if the present volume of new house starts is to be maintained. What's worrying the builders is the long time-lag between initial planning and final completion of their units—sometimes as long as 24 months. Action at this session of Congress won't be felt much before 1954.

(Continued on page 302)





## Complete Signaling Systems from One Responsible Source



Electrical signaling systems usually consist of a number of different components which, when electrically connected, form a complete operating system. For example, Clock and Program Bell Systems for schools often comprise a program time instrument, a central clock-resetting device, a manually-operated cross-connecting bell control board, indoor and outdoor audible signals such as bells, buzzers and horns, and dual-motored clocks of various styles. The Fire Alarm and Intercommunicating Telephone Systems for schools are just as diverse in their components.

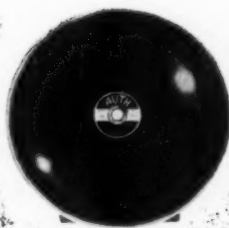
Likewise, the signaling systems which comprise the nerve centers of hospitals, housing projects, industrial plants and commercial establishments all consist of many different components electrically connected to perform their necessary, and often vital, functions.

The importance of securing all components of a system from one responsible source is obvious. To the architect, engineer, distributor and electrical contractor it means the ability to specify, purchase and install with the utmost confidence and with a minimum of effort and expense. To the owner it means standardization of equipment with consequent ease of maintenance.

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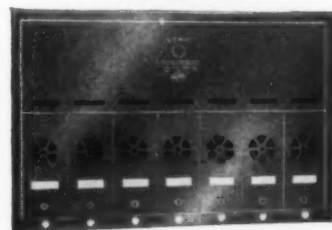
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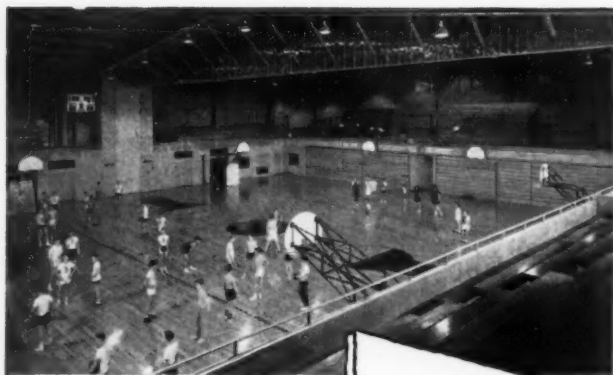
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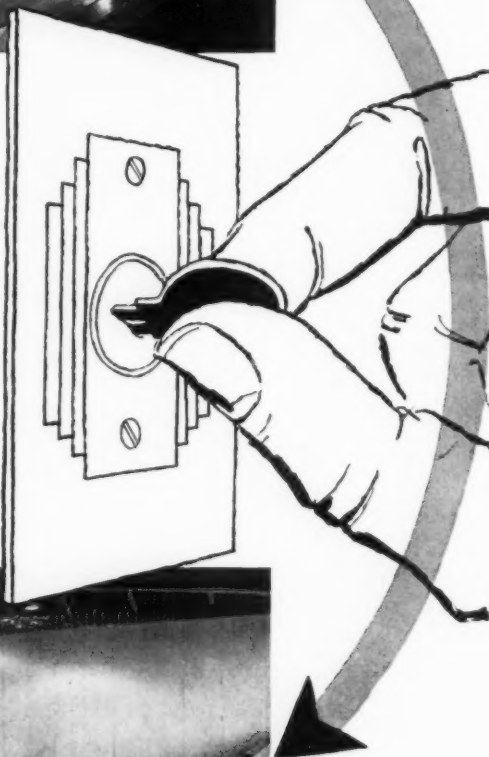
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## THE RECORD REPORTS

### WASHINGTON

(Continued from page 298)

#### Cole Debates HHFA Future

In his New York speech, Mr. Cole said he is debating whether to leave HHFA as it is or to separate its activities by type of function — as lending, welfare and construction.

Another question Mr. Cole is considering is the relation of present housing policies to national requirements — with a view to eliminating all functions not absolutely required in this field of housing policy as it bears on need.

In addition, Mr. Cole said he hoped to "formulate other means as may be needed to support a strong housing economy, to improve the living conditions of all families with emphasis on those of lower income, and to speed the elimination of our slums."

#### Public Housing: 35,000 Units?

But he stressed again that there would be no major changes until his survey had been completed. It was in this spirit that he made his recent recommendation to a House appropriations' subcommittee that the public housing program for fiscal 1954 be continued at the 35,000-unit level. This, he said, was the only "fair and consistent" stand to take until the review is completed. The 35,000 figure was voted by Congress for the 1953 program.

#### AIRPORT AID: WEEKS FOR CUT; MAYORS WANT MORE

Congress is being importuned for both cuts and increases in the national program of aid to airport construction and improvements under the Federal Airport Act of 1946. Individual Congressmen can be depended upon to resist stoutly any cuts affecting projects in their home territories.

Secretary of Commerce Sinclair Weeks was after the cuts as part of his 15 per cent slash in the Truman Administration's budget for the Department of Commerce for fiscal 1954. The downward revision took \$60 million from the Civil Aeronautics Administration's allotment of \$200 million. Most of the rest of Secretary Weeks' \$169 million cut came from the Maritime Adminis-

(Continued on page 300)

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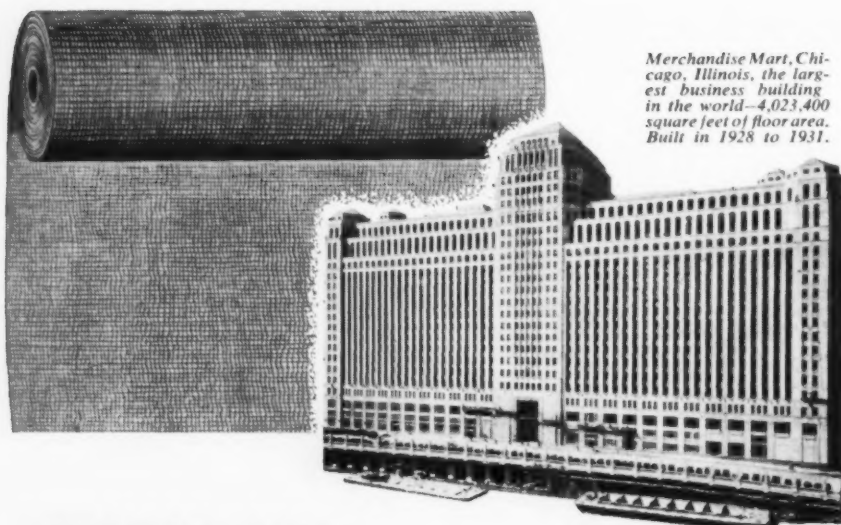
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## THE RECORD REPORTS

### WASHINGTON

(Continued from page 302)

tration, which would lose \$80 million under his plan.

The U. S. Conference of Mayors, on the other hand, was petitioning Congress to make far more substantial appropriations for fiscal 1954. A Conference report, "The Need for an Expanded National Airport Program," was sent to all members of the House and Senate in March.

The Mayors' report emphasized that many local sponsors throughout the country are ready and waiting with their share of funds for airport construction programs, only to be held up by lack of federal assistance. CAA has reported that as of September 1952 there were 362 states, counties, cities and other units with \$150 million in funds available, or easily made available, for airport development.

### 4815 Projects Needed: CAA

As for the need, the report cites CAA's 1952 revised National Airport Plan, which indicates current requirements of 2232 new municipal airports and improvements for 2583 existing fields — 4815 projects in all.

The Federal Airport Act authorized a \$500 million program of federal grants equal to about half the cost of new airport construction and improvement of existing fields. For fiscal 1947, first year of operation, Congress appropriated \$45 million; the amounts voted decreased steadily in succeeding years until in 1953 only \$14,321,154 was provided. Nearly \$300 million of the original \$500 million authorized remains to be appropriated. The life of the program was extended in 1951 to 1958.

### ADDENDUM

The RECORD regrets the inadvertent omission from the list of Merit Award winners at the annual convention of the National Association of Home Builders of the name of Gross-Morton, builders of the private-home community in Aiken, S. C., for personnel of the Savannah River plant of the Atomic Energy Commission.

(More news on page 310)



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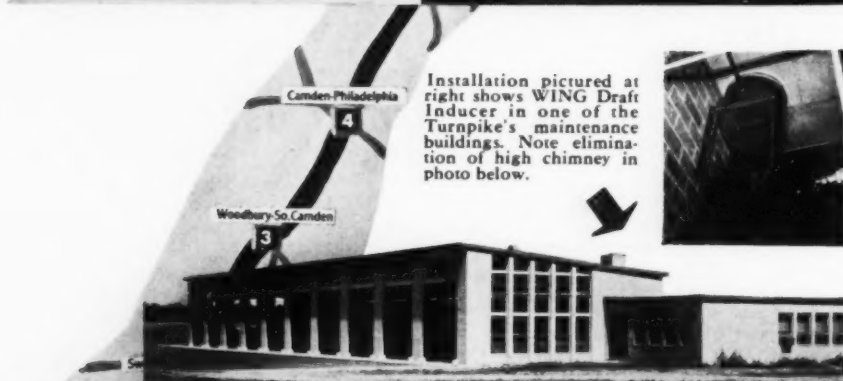
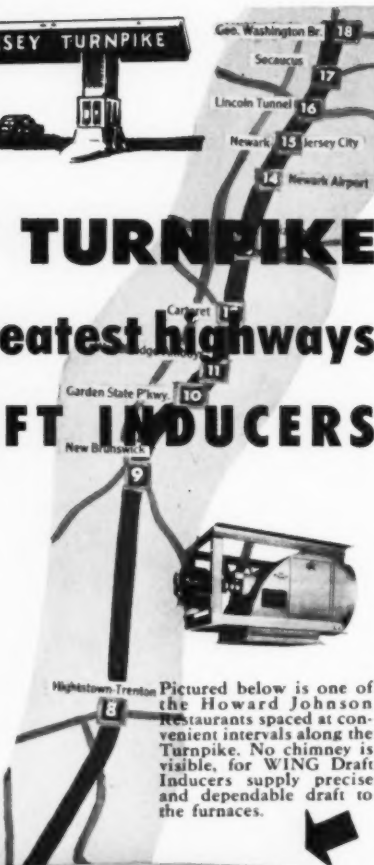


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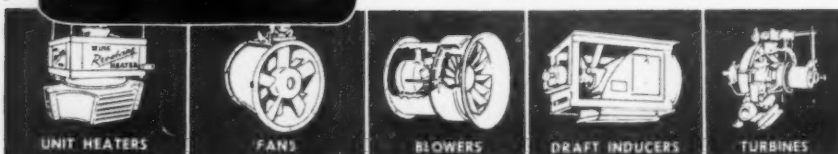
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## THE RECORD REPORTS

(Continued from page 306)

### ON THE CALENDAR

**May 5-June 30:** Eighth annual exhibition of Contemporary American Indian Painting — Philbrook Art Center, Tulsa, Okla.

**May 9:** Missouri State Architects Day; all-day meeting of the state association, including seminar on schools — Governor Hotel, Jefferson City, Mo.

**May 9-15:** Society of the Plastics Industry annual meeting and conference — cruise to Bermuda.

**May 18-20:** Canadian Hospital Council — Chateau Laurier, Ottawa, Ont.

**May 18-22:** Fifth National Materials Handling Exposition, under the sponsorship of the Materials Handling Institute — Convention Hall, Philadelphia.

**May 19-22:** 1953 Electrical Exhibition, Electrical Manufacturers' Representatives Association of Michigan Inc. — Michigan State Fair Grounds, Exhibition Building, Detroit, Mich.

**May 24-28:** 35th Annual Meeting, Scientific Apparatus Makers Association — The Greenbrier, White Sulphur Springs, W. Va.

**May 25-30:** Eighth International Hospital Congress — Church House, Great Smith Street, Westminster, London.

**May 26-27:** Electric Heating Conference, American Institute of Electrical Engineers — Detroit.

**June 9-12:** Fourth National Store Modernization, Building and Maintenance Show — Madison Square Garden, New York City.

**June 10-13:** Annual meeting of Board of Directors, American Institute of Architects — Olympic Hotel, Seattle, Wash.

**June 10-13:** British Architects Conference — Canterbury & Folkestone, England.

**June 15-19:** 85th annual convention of the American Institute of Architects — Olympic Hotel, Seattle, Wash.

**June 15-19:** Exposition of Basic Materials for Industry; an international exposition for product development — Grand Central Palace, New York City.

**June 16-18:** Materials Conference in conjunction with Exposition of Basic Materials for Industry — Hotel Roosevelt, New York City.

**June 16-19:** National Spring Technical Meeting, American Welding Society — Hotel Shamrock, Houston, Tex.

**June 22-26:** 1953 Annual Meeting, (Continued on page 314)





# "MUST" READING

for everyone who  
specifies lighting...

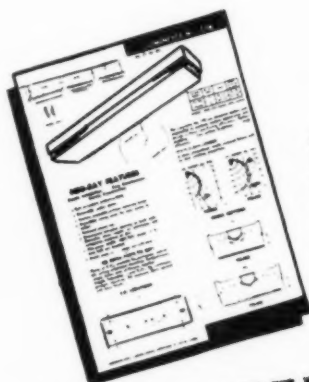
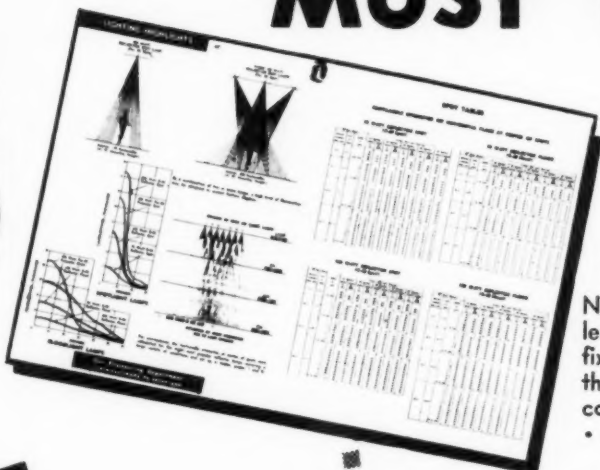
## NEO-RAY CATALOGS

New Fixtures . . . New Data . . .

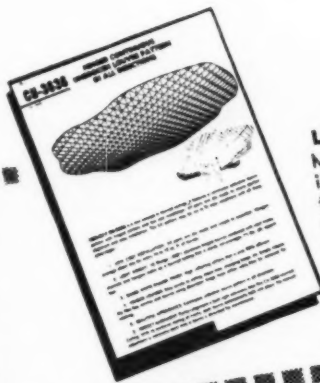
New Low Prices

Now you can calculate your lighting problems in a few seconds with any type of fixture. NEO-RAY is first to bring you all this practical information in simplified and condensed form:

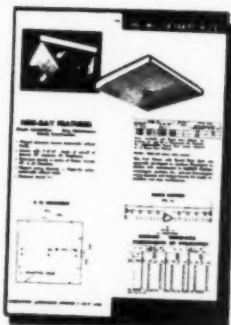
- Comparative Output of Lamps
- Shielding and diffusion
- Modern Illumination Levels
- Selecting of Fixtures
- Color Selection of Lamps
- Lighting Calculations
- Spot Lamp Tables for Computing Light Intensities for Displays, etc.



**Catalog 5204  
LUMINETTE**  
With Plexiglass Neo-Rex Acrylic Plastic bottoms. 24", 48" and 96" fixtures. Surface, pendant and recessed. Fluorescent, rapid start and slimline.

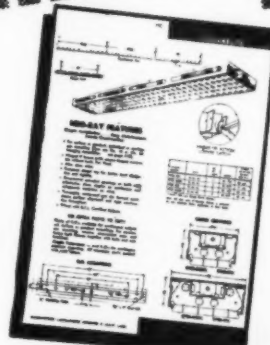


**Catalog 5205  
LOUVRED CEILINGS**  
ML Lay-in Louvred Ceilings, CU Hinged Continuous Unbroken Louvred Patterns in all directions, and LC Hinged Frame units — to meet all job conditions.



**Catalog 5206  
MAMMOTH LINE**  
4' sq., 2' sq., 2'x4' surface and recessed fixtures in fluorescent, rapid start and slimline.

**Catalog 5207  
COMMERCIAL**  
48", 96" open, louvred bottom, flat and curved lens and glass. Recessed, surface or pendant mounting. Fluorescent, rapid start and slimline.



**ROTO-STRIP**  
An entirely new development in incandescent display lighting. The first . . . the only . . . complete compact shel-low units. Unlimited uses: window lighting, floor displays, poultry raising, stage, etc. Ideal for anything requiring high-lighting.

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NO EXTRA PARTS TO BUY!**

For Recessed . . . Surface . . . or Suspended . . . all necessary parts packed with each fixture for individual or continuous installation.

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315 East 22nd St.  
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Please rush the following NEO-RAY Catalogs to us:

- ☐ Catalog 5204 Luminette
- ☐ Catalog 5205 Louvred Ceiling
- ☐ Catalog 5206 Mammoth Line
- ☐ Catalog 5207 Commercial
- ☐ Roto-Strip

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Firm \_\_\_\_\_  
Type of Business \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

## THE RECORD REPORTS

(Continued from page 310)

American Society for Engineering Education — University of Florida, Gainesville, Fla.

June 23-30: 1953 Aspen Design Conference — Aspen, Colo.

June 29-July 3: Annual Meeting, American Society for Testing Materials — Chalfonte-Haddon Hall, Atlantic City, N. J.

July 11-Aug. 22: Fourth Annual Design Workshop for Students of Architecture — Instituto Tecnológico de Monterrey, Mexico.

July 27-Aug. 14: School Plant Planning Workshop conducted by Department of Architecture and Architectural Engineering — University of Colorado, Boulder, Colo.



**Dollars for labor?  
Same as with  
cast iron soil pipe**

### **DURIRON ACIDPROOF DRAIN PIPE**

The fact that Duriron is installed by ordinary plumbing methods at no added cost is important, of course. But that's only half the story. In most installations where corrosive wastes are to be handled, the first cost of installing Duriron Drain Pipe is the last cost. Duriron, a high silicon iron alloy, provides resistance to corrosion, erosion and abrasion throughout the entire thickness of the pipe wall. It will generally outlast the building in which it is installed. Available also in standard fittings. Write for Bulletin PF/1.

**THE DURIRON COMPANY, Inc., 405 North Findlay St., Dayton, Ohio**  
**Available from stock in principal cities**

## OFFICE NOTES

### **Offices Opened**

• A. B. Eastwood Jr., Architect, and Dana B. Stetser, announce the opening of their offices at 1415 Old York Road, Abington, Pa.

• Harry B. Lentz, A.I.A., architect and engineer, and John J. DePierro, engineer, have announced the opening of offices for the general practice of architecture and engineering. The firm, which will be known as Lentz & DePierro, will have offices at 509 Linden St., Allentown, Pa.

• Maynard Pearlstine, Architect, has announced the opening of his office for the general practice of architecture at 1226 Bull St., Columbia, S. C.

• William J. Seifert has opened an office for the practice of architecture at 120½ Broadway, Fargo, N. D. The firm will be known as W. J. Seifert Associates.

• Marvin L. Thomas announces the opening of an office for the general practice of architecture at 1910 Arnold Ave., Topeka, Kan.

### **New Firms, Firm Changes**

• Kenney, Cammack & Scott Inc. of 601 South Limestone, Lexington, Ky., has been succeeded by the new firm of Cammack & Scott Inc., Architect & Engineer, 150 Barr Street, Lexington. Mr. Kenney is continuing as consultant engineer under the firm name of Kenney and Company, 601 South Limestone, Lexington.

• Irving Quinn, structural engineer, and A. Leichtman, structural engineer, have announced formation of the firm of Leichtman & Quinn, Consulting Engineers, with offices at 20 Vesey Street, New York 7, New York.

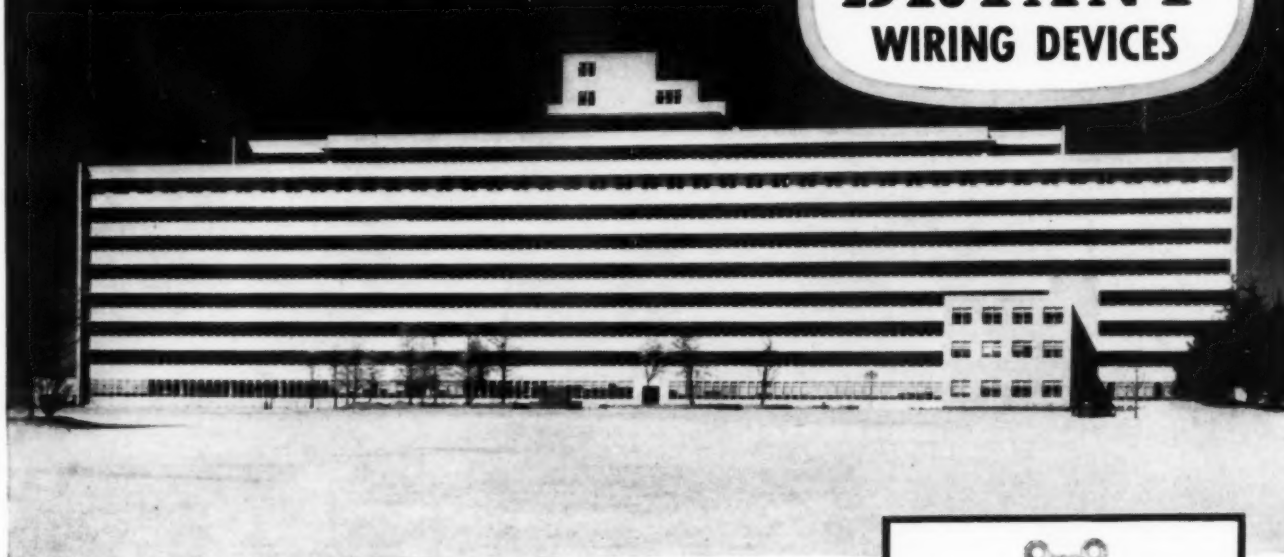
• A. V. McIver and Associates have announced a change in name of the partnership to McIver, Hess & Hangsjaas, Architects, and a change in office location to 603 Strain Building, Great Falls, Mont.

• R. Kennon Perry, Architect, Mortgage Guarantee Building, Atlanta, announces that Clarence A. Smith II became associated with him as of April 1. Mr. Smith, who formerly practiced as C. A.

(Continued on page 318)

# At the Seattle Veterans' Administration Hospital

THE ANSWER IS  
**BRYANT**  
WIRING DEVICES



Architects—Naramore, Bain, Brady & Johanson—Seattle, Wash.  
Electrical Engineer—Beverly A. Travis & Associates—Seattle, Wash.  
Electrical Contractor—Agutter Electric Co.—Seattle, Wash.  
General Contractor—Sound Construction Co.—Seattle, Wash.

**NEW 325 BED VETERANS' HOSPITAL.** This ultra-modern, 8-floor hospital building is functional to the last detail—and keynoting its functional design are dependable Bryant wiring devices throughout the building.

**THE ANSWER IS BRYANT QUALITY.** When specifications called for once-installed, stay-installed wiring devices, the choice was Bryant. For instance, rugged 20 Ampere switches, No. 5861, meet rigid hospital standards where heavy loads are encountered. And the popular No. 4832 Bryant Duplex Outlet does yeoman duty in rooms, corridors—any place a dependable outlet is required.

**MAKE YOUR CHOICE BRYANT.** There's a full line of Bryant quality-made wiring devices to meet any specification. Choose from the full line for residential, commercial or industrial applications.

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No. 5861



No. 4832

*Specify Bryant  
from your Electrical  
Distributor*



## THE RECORD REPORTS

(Continued from page 314)

Smith & Associates in Albany, Ga., has closed his office there.

• The firm name of Thompson and Beane, Consulting Engineers of 775 Main Street, Buffalo, has been changed to Gill, Beane and Schlenker.

### New Addresses

The following new addresses have been announced:

Ernest Alicandri, Architect, 146 Livingston St., Brooklyn 2, N. Y.

David I. Bockius, 23 Clover Building, 203 W. Holly St., Bellingham, Wash.

Craig & Madill, Architects, 734 Spadina Ave., Toronto 4, Ont.

Office of Michael J. DeAngelis, Architects and Engineers, City Center Building, 121 N. Broad St., Philadelphia.

W. Parker Dodge Associates, Architects and Engineers, Red Mill Road, Rensselaer, N. Y.

William M. Dreher, Architect, 490 N. Snelling Ave., St. Paul, Minn.

Foss & Company, Architects & Engineers, 28 N. Third St., Moorhead, Minn.

Henry Robert Harrison, Architect, P.O. Box 335, Pacific Palisades, Calif.

Heacock & Platt, Architects, Suite 1006, Schaff Building, 1505 Race St., Philadelphia, Pa.

James W. Mancuso, Architect, No. 9 Memorial Parkway, Long Branch, N. J.

Patterson & Worland, Architects, No. 2 Thomas Circle, N.W., Washington, D. C.

Louis G. Redstone, Architect, 10811 Puritan, Detroit, Mich.

### AWARDS

• *Rome Prize Fellowships* in architecture have been awarded for the year beginning Oct. 1, 1953 to Robert L. Myers, Winston-Salem, N. C., and Warren A. Peterson, Jamestown, N. Y. Mr. Myers, now with The Architects Collaborative, Cambridge, Mass., is a graduate of Cornell and has an M. Arch. from Harvard. Mr. Peterson received his B. Arch. from Yale, where he is now a graduate student.

The Fellowships, valued at about \$3000 each, are given by the American Academy in Rome, founded in 1894 to further the fine arts and classical studies in the United States, mainly by granting fellowships to young American artists and scholars for independent work. Fellowships are given also in painting, sculpture, musical composition and classical studies.

Selection jury in architecture this year included William Platt, chairman; Pietro Belluschi, Walker O. Cain, Alfred Easton Poor, Hugh Stubbins Jr.

### COMPETITIONS

• The New York Chapter of the American Institute of Architects has cancelled its Honor Awards Competition for 1953. Only nine entries had been received by March 2, deadline for registration in the program, which was restricted to school buildings. The committee has recommended that a new program be

(Continued on page 322)



**WHY "HILLYARD"**  
when choosing  
**FLOOR TREATMENTS?**

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**Because:** Hillyard trained floor experts (Hillyard Maintainers) act as your job captains (without charge) from construction stage to finished beauty.

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**FLOOR HILLYARD TREATMENTS**

**ST. JOSEPH MISSOURI**

# NEW!

Now, for the first time in louvered fixtures, low-brightness comfort is possible from all viewing angles—cross-wise and end-on.

Day-Brite engineers, in keeping with a Day-Brite habit of being first in the field with new ideas for improved comfort in lighting, have

developed a remarkable new low-brightness louver.

Called the PARA-LOUVER, this new discovery reduced brightness as much as 50% without sacrificing efficiency. PARA-LOUVERS are available now for use with Day-Brite Alzak aluminum parabolic troffers.



## HOW NEW PARA-LOUVER\* REDUCES BRIGHTNESS

A series of scientifically calculated parabolic segments are "coined" into the flat aluminum surface of the louver.

Collectively, these segments transform the louver into an assimilated all-over parabolic surface with all the desirable low-brightness properties of parabolic reflection—but without changing its basic physical form as a flat baffle.

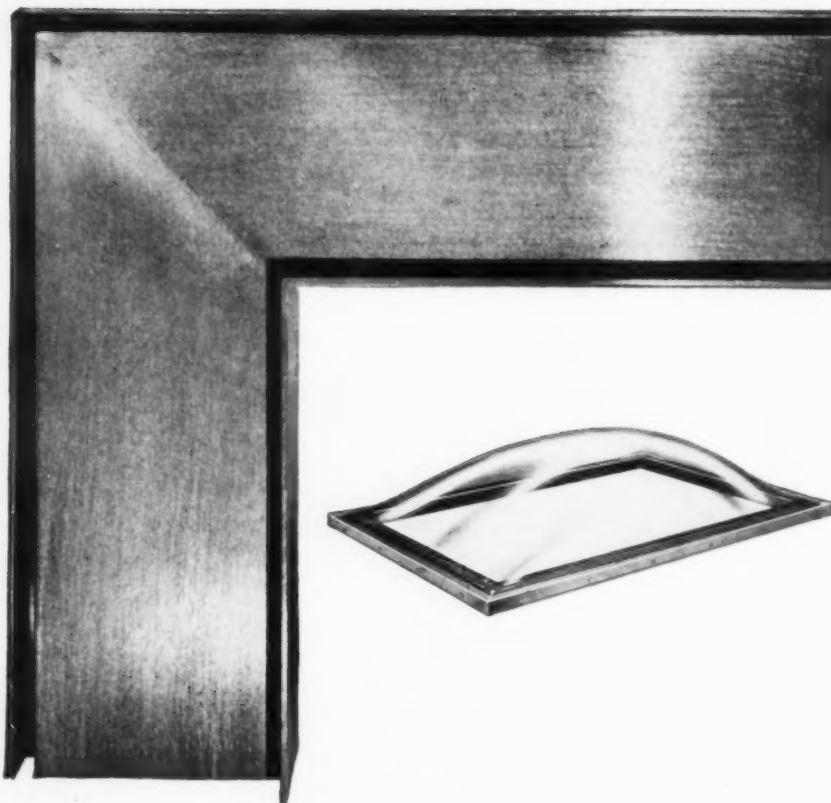
Get all the facts about this important new PARA-LOUVER. Write today for Bulletin OD-593.

## EXCLUSIVELY BY...



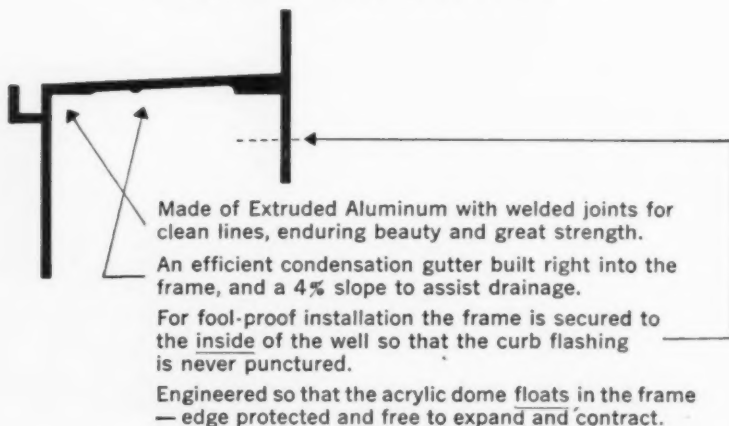
\* PATENT PENDING

Day-Brite Lighting, Inc., 5465 Bulwer Ave., St. Louis 7, Mo. In Canada: Amalgamated Electric Corp., Ltd., Toronto 6, Ontario.



## It's all in the frame . . .

When you specify **Wascolite Skydomes** you can be sure your buildings will have an overhead daylighting system with high-quality illumination and no maintenance problems. Years of experience in the waterproofing field have helped us develop a pre-fabricated acrylic unit that is completely trouble-free — and it's all in the frame!



**Wascolite Skydomes** come in three basic shapes — 17 stock sizes — with clear or white translucent acrylic domes. For the complete story see Sweet's 19a or write for our new A. I. A. folder.

**Wasco Flashing Company**, 82 Fawcett Street, Cambridge, Mass.

## THE RECORD REPORTS

(Continued from page 318)

planned for 1954 open to any class of buildings.

- The store design competition which was to have been held in connection with the Fourth National Store Modernization Show at Grand Central Palace June 9-12 has been postponed until next year, according to the Store Modernization Institute, sponsors of the show. In its place, the Institute is sponsoring an exhibition, "One of my best stores," in which some 1500 architectural firms have been invited to participate.

### AT THE COLLEGES

#### Scholarships, Fellowships

- Applications are due May 15 for the George G. Booth Traveling Fellowship in Architecture, the College of Architecture and Design of the University of Michigan has announced. The competition is open to all graduates of the school who are under 30 on May 15. Prospective candidates should address the Office of the College of Architecture and Design, 207 Architecture Building, Ann Arbor, Mich.

- The Francke Huntington Bosworth Memorial Fellowship in Landscape Architecture is offered by the Department of Landscape Architecture of Cornell University for the academic year 1953-54. The stipend is \$1000. Candidates must be graduates of an accredited school of architecture or landscape architecture. The academic program will stress the relationship of landscape architecture to architecture and city planning; it will offer the degree of Master of Landscape Architecture. Further information may be obtained from Dean Thomas W. Mackesey, College of Architecture, Cornell University, Ithaca, N. Y. Applications will be received until June 1.

#### Heating, Air Conditioning Tips

Copies of the Proceedings of the Short Course for Architects in Planning for Heating and Air Conditioning in Small Buildings, held this winter at the University of Illinois, are available from the Division of University Extension at \$3.50 per copy.

(Continued on page 326)



Series 3600, 3700

GLASS SIDES →

Series 3600, 3900

← METAL SIDES

# Another Litecontrol First!\*

## Fixtures that make Work Light

These LITECONTROL "surface troffer" fixtures combine comfortable lighting levels with new ease of installation and maintenance.

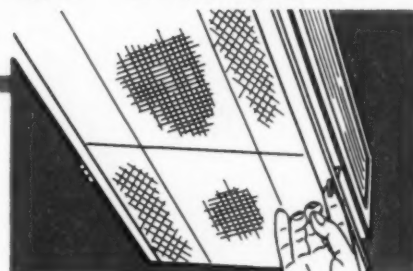
\* Lenses are set in hinged doors, equipped with LITECONTROL Trigger Catches. Absence of visible dividers between doors provides attractive, unbroken length of lenses.

Models 3600 through 3700 have glass side panels. Reduce contrast between ceiling and fixture with upward illumination.

Extremely shallow, economical, easy to open and close, they make a smart choice for offices, banks and stores.

Get the full time-and-money-saving story on LITECONTROL's complete line of fixtures. Write, today.

CAT. NO.	NO. OF LAMPS	SIDES
3624	2-40W Bipin	Glass
3724	2-48T12 Slimline	Glass
3728	2-96T12 Slimline	Glass
3824	2-40W Bipin	Metal
3924	2-48T12 Slimline	Metal
3928	2-96T12 Slimline	Metal



**EASY TO OPEN** — Just a touch on the Triggers, and a Litecontrol door conveniently opens. No screws or adjustments of any kind necessary.



**EASY TO CLOSE** — Simply push a Litecontrol door shut. The Trigger Catch snaps and holds instantly, safely, dependably



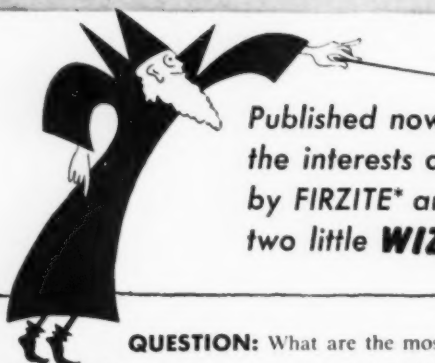
## LITECONTROL *Fixtures*

LITECONTROL CORPORATION

36 PLEASANT STREET, WATERTOWN 72, MASSACHUSETTS

DESIGNERS, ENGINEERS AND MANUFACTURERS OF FLUORESCENT LIGHTING EQUIPMENT DISTRIBUTED ONLY THROUGH ACCREDITED WHOLESALERS

# The Architect's Question Box



Published now and then in  
the interests of wood finishing,  
by FIRZITE\* and SATINLAC\*, those  
two little **WIZARDS WITH WOOD.**

\*TRADEMARKS

**QUESTION:** What are the most popular finishes of today?

**ANSWER:** "Light Natural", "Blond" and "Pickled"—all obtained with SATINLAC, or SATINLAC and White FIRZITE.



**QUESTION:** What is the "Light Natural Effect"?

**ANSWER:** The wood is kept as near to the natural color and tone as possible without a "built-up" effect or a glossy finish. Water-clear SATINLAC is the perfect answer for achieving this finish.



**QUESTION:** What is the "Blond Effect"?

**ANSWER:** It is a natural finish with a whitish or tinted white undertone that catches in the grain and plays it up subtly and smartly. Used on close grained woods such as Birch, Maple, etc., White FIRZITE has been scientifically developed to get this effect.



**QUESTION:** What is the "Pickled Effect"?

**ANSWER:** Obtained on open pored woods such as Oak, Elm, etc., by coloring the deep pores of the wood. It differs from the blond effect in that the pores stand out in contrast to the wood; whereas, in the blond effect an overall cast results. Both the "Blond" and "Pickled" effects are best obtained with White FIRZITE and SATINLAC.



**QUESTION:** Paint stores do not always carry stains in all shades. How can I make my own stain?

**ANSWER:** By adding colors-in-oil to Clear or White FIRZITE any color stain can be produced. Colors-in-oil added to Clear FIRZITE produce dark stains such as Oak, Walnut, Mahogany, etc. Added to White FIRZITE light pastels and grays are made.

*If you have any problems in wood finishing, let us help you. Write also for specification sheet.*

*May we send you a blond Birch panel showing SATINLAC finish?*

**UNITED STATES PLYWOOD CORPORATION**  
Dept. 332, 55 West 44th Street, New York, N. Y.



## THE RECORD REPORTS

(Continued from page 322)

### Engineer Enrolments Climb

With the shortage of engineers for industry as intense as ever, freshman engineering student enrolments are on the increase, reports the Engineering Manpower Commission of the Engineers Joint Council. The rise in Fall 1952 enrolments was 30.5 per cent; the 51,631 new students were the third largest class ever to enter the engineering schools—exceeded only in 1946 and 1947. An increase of 4.2 per cent in graduate engineering students is also reported.

### Schweinfurth Award Winner

Charles E. Rimer, fourth-year student, has been named by the School of Architecture at Western Reserve University, Cleveland, as 18th winner of the Schweinfurth Travel Award for a summer of study in Europe.

The annual grant is made available to Western Reserve architecture students through the Charles Frederick Schweinfurth Scholarship Fund, administered by the Cleveland Museum of Art.

### Prefabbers Advised to "Sell"

Prefabricated housing manufacturers are advised in the report on a recent survey that they will have to do a better "selling job" if they are to continue to gain ground in the housing field.

The survey, conducted by the Housing Research Center of Cornell University under contract to the Housing and Home Finance Agency, sent interviewers to 43 prefabricated housing plants from coast to coast. The report, entitled "Practices and Precepts of Marketing Prefabricated Houses," was written by Prof. Glenn H. Beyer, director of the Cornell Center, and Theodore B. Yantis.

Although each of the 43 firms participating in the study was producing a volume of homes in its factory, none was operating to capacity, the report noted. To build bigger volume, it emphasized, stronger sales organizations and advertising programs will be needed, as well as a public relations effort to erase the idea, stemming from the war, that prefabrication stands for temporary construction: "It was, and still is, necessary to convince the public that a permanent house can be built through prefabrication."

(More news on page 328)

## The Case for **CAST IRON**

*No tricky  
trenching  
required*



When you're using **Cast Iron Soil Pipe** for the house-to-sewer line you can lay it one foot or ten feet deep. You can lay your line in loam, sand, gravel or any mixture. And your men don't have to be sculptors and scoop out a precise fit of soil to pipe contours. **Cast Iron Soil Pipe** is mechanically strong.

Actual specifications, written for the laying of non-metallic pipe, contain such directions as these:

"Each pipe shall be laid on a firm bed of 6" of sand so as to give full support to the lower one-third of the barrel. Sand back-fill shall be used at least 6" above the pipe."—From specifications of a Chicago firm of architects and engineers.

"If possible a cradle should be formed in the subgrade to accommodate the pipe."—From installation instructions for non-metallic pipe.

"At no point shall (name of material) sewers be laid at depths of less than three feet below outside grade."—From specifications of Illinois firm of architects and engineers.

Using **Cast Iron Soil Pipe** for the house sewer makes the job simple and certain. Trench it the way you want it. Backfill it normally. Then forget it, with the assurance that your line will be in perfect working order as long as the building stands.

To arrange for the free use of the Institute's sound film, "Permanent Investment", and for helpful information for you and your clients, use the coupon.

**Only  
Cast Iron Soil Pipe  
gives you  
ALL these advantages**

**Rugged Metallic Strength**

**Zero Moisture Absorption**

**No tricky trenching required**

**Permitted from street  
to roof in ALL codes**

**Permanent tightness of  
joints, with flexibility**

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"Permanent Investment"  
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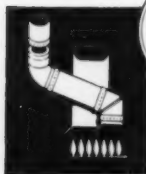
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Metalbestos' insulated double wall construction assures clean, fresh air—free of fumes and musty odors—throughout prolonged operation of gas appliances. It gives maximum protection to walls, draperies and furnishings against damage caused by moisture condensation.

Special precision-formed couplers make possible accurate, fast assembly—cut installation costs—and provide tightly sealed joints. All aluminum construction eliminates cracking and prevents deterioration from the corrosive effects of flue gases.

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Based on the latest venting research, this new booklet explains the important principles and rules to follow for the proper venting of gas appliances. It includes information on vent capacities and the location of vents together with illustrations of typical venting installations. Write today to Dept. L-788.



# METALBESTOS

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## THE RECORD REPORTS

(Continued from page 326)

### ALUMINUM USED TO FACE SKYSCRAPER IN NEW YORK

New York's first "aluminum" building is going up at 99 Park Avenue on the east blockfront between 39th and 40th streets. Emery Roth and Sons are architects and Tishman Realty & Construction Company Inc., the owners.

The façade will consist of some 1800 die-pressed aluminum wall and window panels bolted to the steel framework of the building. Each of the panels, which will be two stories high, will have a four-faceted geometrical pattern with two large reversible windows set with heat-absorbent glass. Each panel will be infused with a gray tone to eliminate the glare that such a large surface would otherwise produce; windows will be left in their natural state for contrast.

The panels will be fully prefabricated, including the windows, from extruded aluminum shapes on a production-line basis and will be installed in complete units entirely from within the structure, eliminating the need for erection of exterior scaffolding. Greater speed in enclosing the building will also give workmen engaged in interior work earlier protection from weather and further speed the finishing process.

Decision to use aluminum was reached after study of new aluminum alloys used in the Alcoa Building in Pittsburgh and a series of tests by General Bronze Corp.



Scale model of 99 Park Avenue project is shown here superimposed on photo of actual site. Architects: Emery Roth and Sons

(Continued on page 330)

*this is*  
**GLASS**



## The TIME-TESTED MATERIAL

- It is non-combustible . . . won't burn.
- It is rigid . . . doesn't sag or warp.
- It has a permanently hard, impervious surface, not affected by time, abrasion or exposure to the elements.
- It won't corrode or stain.
- It resists chemicals—acids, solvents, etc.
- It retains its original clarity, brilliance and lustrous beauty.
- It is easily installed, maintained and cleaned by conventional methods.

The traditionally-preferred material for window and skylight glazing, glass, and glass alone, gives you the proven performance you need for better daylighting at ultimately the lowest cost.

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WORLD'S LARGEST MANUFACTURER OF ROLLED FIGURED AND WIRED GLASS

## THE RECORD REPORTS

(Continued from page 328)

### ARCHITECTS HEAR LESCAZE AT MICHIGAN CONVENTION

William Lescaze, F.A.I.A., was among the principal speakers at the 39th annual convention of the Michigan Society of Architects March 11-13 at the Hotel Statler in Detroit.

Other speakers on the convention program were Philip N. Youtz, A.I.A., of

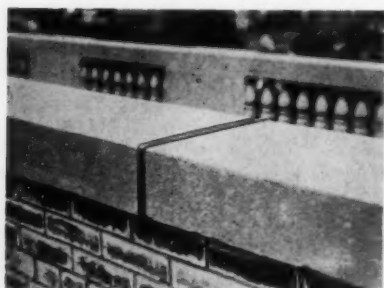


At Michigan banquet (from left): William F. Mulcahy, Michigan Producers' Council president; Detroit Commissioner of Buildings Joseph P. Wolff; William Gillett, national vice president, P.C.; Paul A. Brysselbout, Saginaw Valley A.I.A. president; Karl B. Foster, Michigan Associated General Contractors president; John N. Richards, A.I.A. Great Lakes regional director; Marshall Fredericks, sculptor, Birmingham, Mich.; Ivan N. Kirlin, the Kirlin Co., Detroit; Leo M. Bauer, A.I.A.; Linn Smith, president of the Michigan Society of Architects



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lift-slab fame, and Ben John Small of Alfred Hopkins Associates.

The residence of Walter J. Rozycki, of Grosse Ile, Mich., was selected by public vote for first place in the architects'-own-homes exhibition. Warren Platner received first place for a remodeled home.

Climax of the convention was the 11th Michigan Building Industry Banquet co-sponsored by the Michigan Society of Architects, the Producers' Council of Michigan and the Builders and Traders Exchange, Detroit. More than 1000 attended the banquet.

Leo M. Bauer was presented with the Society's first Medal of Honor "for outstanding service to the profession." The medal was designed by Sculptor Marshall Fredericks of Birmingham, Mich., an honorary member of the American Institute of Architects who was at this session made also an honorary member of the Michigan society.

Another highlight of the banquet was the presentation to designer David Hamilton of Detroit of the \$1000 prize in the lighting competition sponsored by the Kirlin Company of Detroit. Ivan V. Kirlin, president of the company, made the presentation.

The competition was for a lighting scheme for the new convention hall to

(Continued on page 332)



# *aluminum* **WINDOWS** *by* **GENERAL BRONZE**

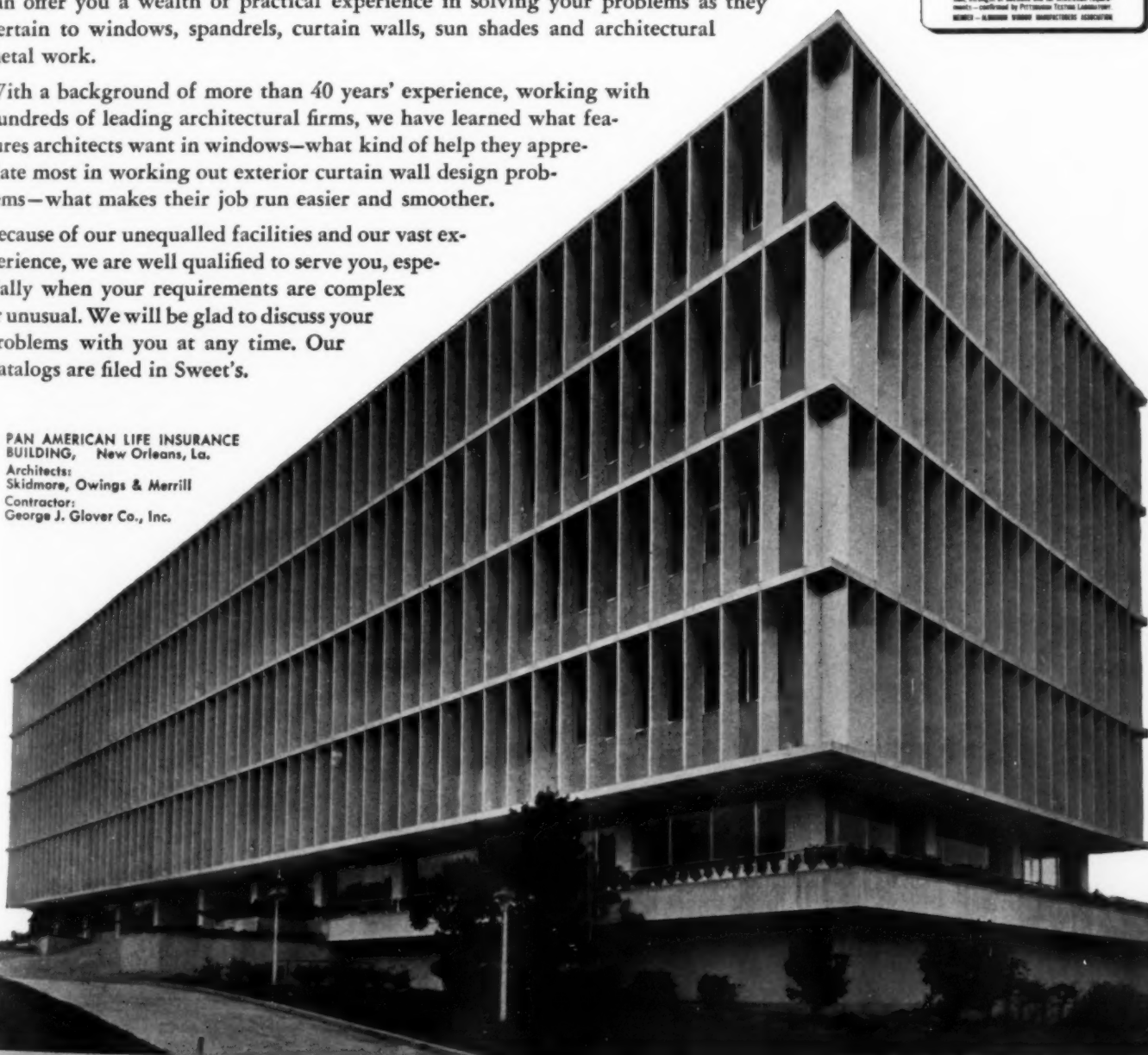
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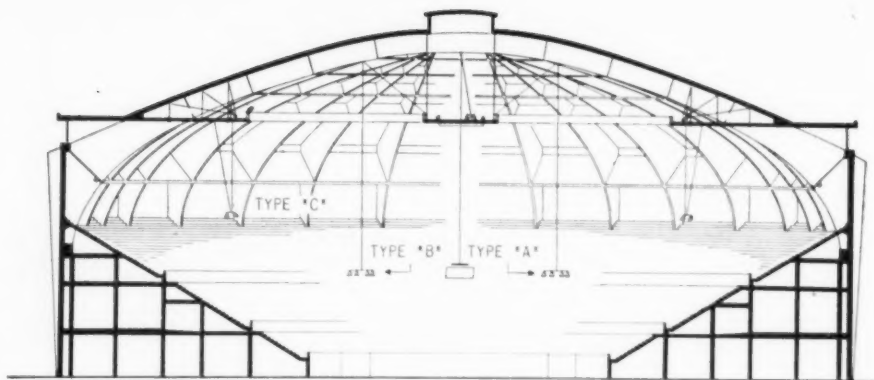
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## THE RECORD REPORTS

(Continued from page 330)

be built in Detroit's Civic Center, for which Giffels & Vallet, L. Rossetti, Inc., Associated Engineers & Architects, are the designers.

The jury reported that the winning design was "perfectly practical and made use of the best possibilities of the architects' design, with lighting sources well distributed as to vertical, horizontal and accent lighting."



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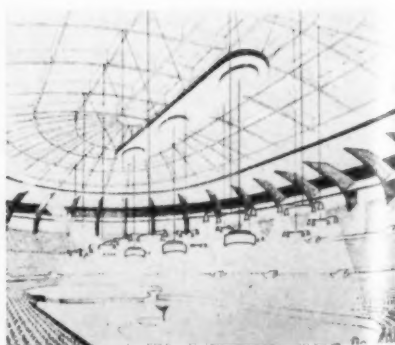
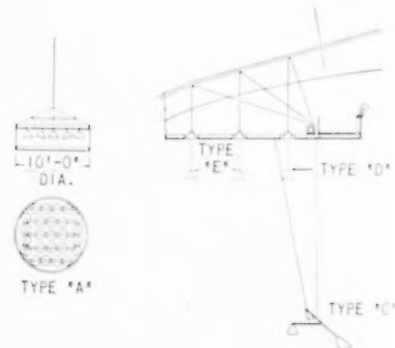
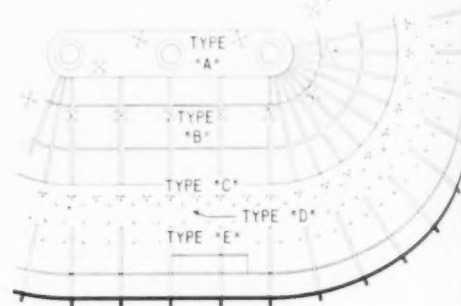
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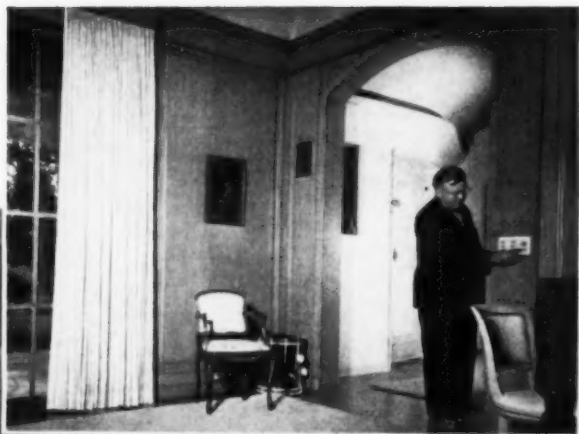
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31-71 WHITESTONE PARKWAY, FLUSHING, N. Y.

Portions of the winning design by David Hamilton of Detroit in the Kirlin Company competition for a lighting scheme for the convention hall of Detroit's Civic Center



(More news on page 334)



Homeowner Sheriffs demonstrates the master selector switch in the living room that opens and closes draperies at the window. Switches also operate draperies in four other parts of the house. This master switch controls 8 additional circuits. There are five master selector switches in the Sheriffs home.



John Byers, A. I. A., Architect

## Lovely mountain-top home makes extensive use of

### **G-E REMOTE-CONTROL WIRING**

G-E remote control wiring is among the many delightful features which were designed into W. A. Sheriffs' new home in West Los Angeles. Mr. Sheriffs explains his reasons for selecting G-E remote-control wiring in this way.

"Even though we wanted a luxury home, our ideas for lighting and electrical control would have greatly increased the cost if it were not for G-E low-voltage remote-control wiring. As it worked out, we were able to provide as complete a system of electrical control as comfort and convenience dictates—and the cost was very reasonable."

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**GENERAL  ELECTRIC**



A flush mounted switch in the living room controls all garden, yard and driveway lights. Wiring costs are held down in the G-E remote-control system because small, lightweight control wire is used to connect switches to relays. You can have as many switches as convenience dictates without increasing the cost prohibitively.

#### **TOUCH OF LUXURY**

G-E remote-control wiring adds a touch of luxury to any home—for little more than the cost of conventional wiring. It is being used in home after home across the nation—some priced as low as \$9,500. For complete information on G-E remote-control, see your G-E Construction Materials distributor or write Section D56-55, Construction Materials Division, General Electric Company, Bridgeport 2, Connecticut.

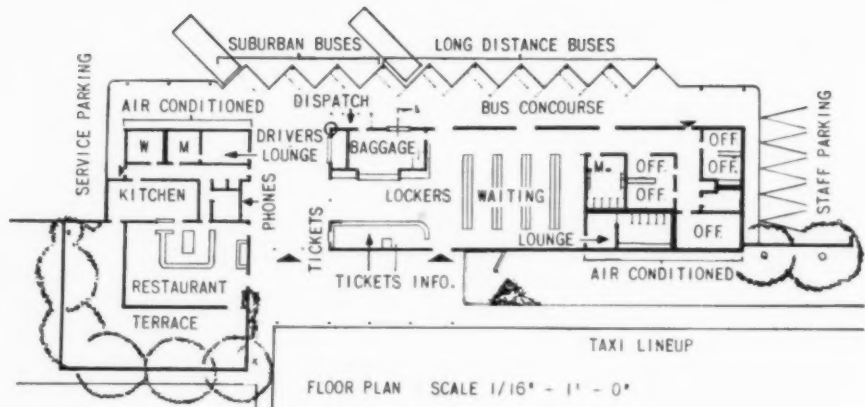


## THE RECORD REPORTS

(Continued from page 332)

### STUDENT WORK HONORED IN FEATHERLITE AWARDS

An interstate bus station was the subject of the 1952 Texas Society of Architects-Featherlite Competition for students of the five architectural schools of Texas. The Featherlite Corporation contributed \$2500 in prize money; \$2000 was awarded in competitions at the in-



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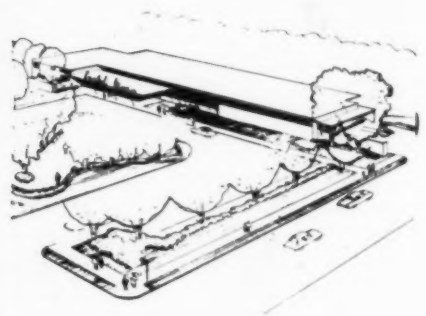
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Grand Award in the Featherlite Competition for architectural students went to Tom Conger of the University of Texas. Jury praised Mr. Conger's design (floor plan above, rendering below) for "straight-forward simplicity"



dividual schools to choose entries for the statewide competition at the Society's annual meeting at El Paso.

Tom Conger of the University of Texas received the \$500 Grand Award in the state competition; and special commendations were given by the Grand Award Jury to James B. Gatton, A. & M. College; Ben Lee Wilson, Texas Tech; J. A. Toline, University of Texas; and Langston Smith Jr., A. & M. College.

Judges were John G. York, Harlingen, Carl J. Young, El Paso, and Baldwin N. Young, Houston, all members of the Texas Society of Architects, and John M. Dockery of Fort Worth, a technical adviser for Greyhound Lines.

Commenting on the entries, the jury report noted that the primary problem of bus station design, the handling of vehicular and passenger traffic, was not solved in a completely satisfactory manner by any of the drawings submitted.

(Continued on page 336)

# Compare!

**insulation** OF GLIDE WITH OTHER WINDOWS



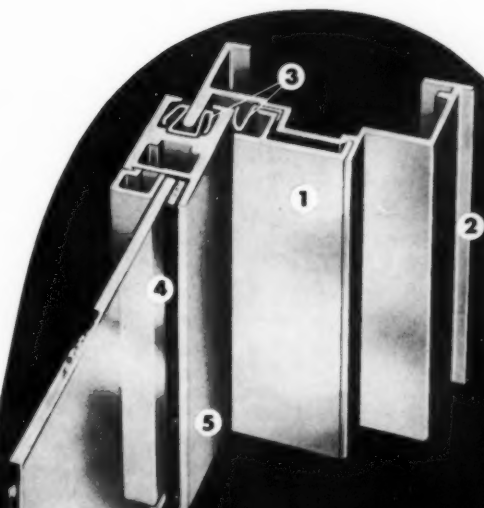
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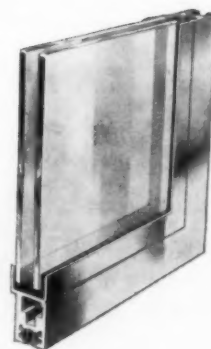
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## THE RECORD REPORTS

(Continued from page 334)

### Direct Solution Praised

Of the Grand Award winner, the report has this to say: "Jury and technical adviser concluded this problem to be the winner because of its straightforward simplicity in plan and elevation. The program was fulfilled in most phases of an operationally sound bus station. Clear thinking was evident in the use of

Featherlite Concrete for both roof and wall panel construction. The economical building layout has allowed for ample parking and approach from the business area, thus enhancing not only this property but also relieving the adjacent business blocks. Restaurant well situated for pedestrian traffic and for use by public without complicating traffic. Dispatcher control good, toilets and drivers' lounge well done. Bus ingress and egress pose a major traffic problem at adjacent intersections. In-line bus loading flexible and allows for direct baggage handling to long-distance busses. Would have been better to have grouped tickets with baggage handling. Landscaping a bit complicated. Stairway would have to be altered."

The Featherlite Corporation has offered to continue the competition for 1952-53 and the offer has been accepted by the Texas Society's Board of Directors.

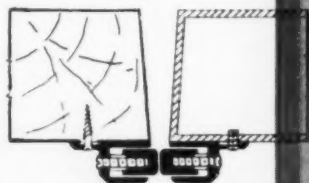
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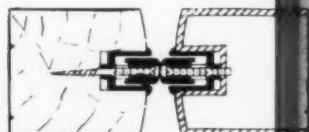
#### Type A

may be applied to either wood or hollow metal bevel doors, or as a stop bead.



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One of four special commendations by the jury was given to entry of James B. Gattton, A. & M. College of Texas. Jury report noted "professional" detailing



Featherlite award winners look over some of the entries after judgment



(More news on page 334)



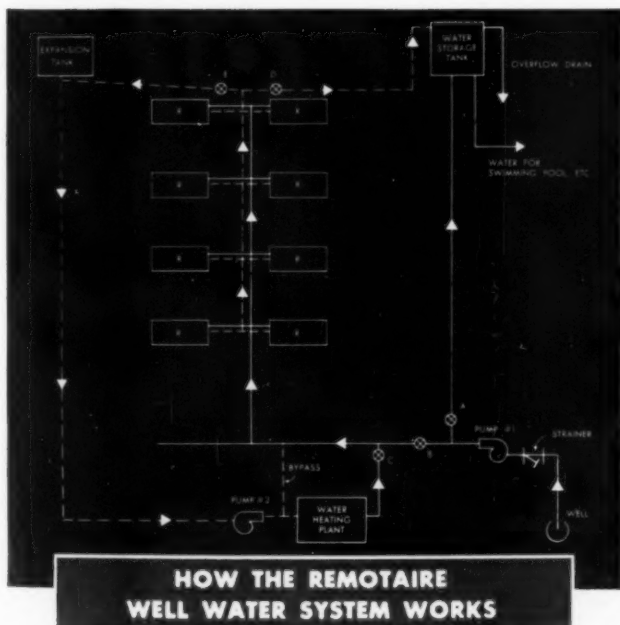
# Another interesting REMOTAIRE installation!

**Individual-room  
remote type units in resort hotel  
provide  
year 'round air conditioning**

*Summer cooling...  
winter heating*

● The Concord Hotel, Kiamesha Lake, New York, found the answer to efficient, economical year 'round air conditioning through the installation of the Remotaire Well Water System—one of a number of different Remotaire systems available for multi-room buildings.

The Remotaire Well Water System may be used in localities where well water is known to be available in adequate supply, proper temperature, and of good quality. The cold well water is used in lieu of a water chilling plant. Consisting of Remotaire Room Units in each room connected by a piping system to the central plant equipment (as shown in

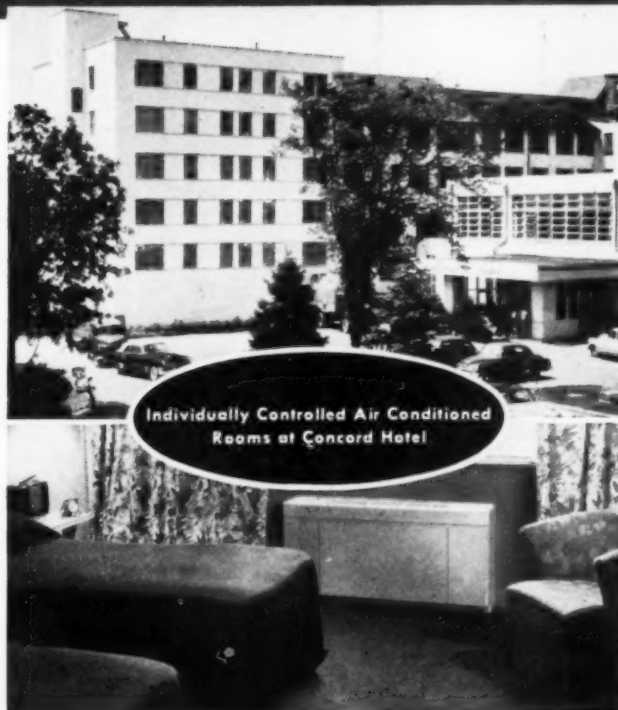


The Remotaire Well Water System consists of Remotaire Room Units in each room connected by a simple piping system to the central plant equipment—a well with pump, water heater, water circulating pump, expansion tank, storage tank and water filter or strainer as shown above.

**FOR COOLING**—Valves A and C are closed. B is open. Pump No. 1 pumps water from well to Remotaire units on each floor from which it travels thru valve D to storage tank on roof. This water is usable for swimming pool or other purposes.

**FOR HEATING**—Heating circuit includes Water Heater, Valve C, Valve E, Expansion Tank, Pump No. 2 and bypass. For operation, close Valves B and D, start Pump No. 2 and boiler, and the hot water circulates through the system.

When cooling is not required, well water may be used for other purposes, and can be pumped direct through Valve A to Water Storage Tank by Pump No. 1.



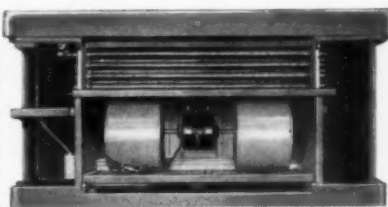
Individually Controlled Air Conditioned Rooms at Concord Hotel

the diagram), this system costs less to install and less to operate. Individual control of each Remotaire unit allows the occupant to choose the room temperature that suits him best without affecting adjoining rooms.

This resort hotel installation is another example of the versatility of the Remotaire for hotels, motels, hospitals, apartments, and other multi-room buildings.

## Top Quality Construction... Easy To Install

The Remotaire is sturdily built of heavy-gauge steel—plus a reinforced air grille—with a bond-erized, baked-on semi-gloss enamel finish. All air passages are acoustically insulated for thermal efficiency and quietness. Coil is designed for right or left hand connections. Spacious end compartments permit easy access to coil connections and controls. Adaptable to a variety of ventilation systems, the Remotaire is ideal for modernization as well as new construction and is available in three models—200, 400 and 600 cfm.



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## THE RECORD REPORTS

(Continued from page 336)

### Baltimore Architecture Show Reviews City's Heritage

Recently on view at Baltimore's Peale Museum, otherwise known as the Municipal Museum of Baltimore, was an extensive exhibition of the city's architecture, ranging from its earliest beginnings up to the present time. The exhibition furnished a rich survey of the



Two examples of Baltimore's Georgian houses. Above, "Homewood," 1801-1803, sometimes called the city's finest late Georgian country house, stands on Johns Hopkins University campus. Below, "Mount Clare," c.1764, probably the oldest house still standing in the city



city's architectural development and included a wide variety of buildings, some of which are illustrated here.

Responding to the museum's project, civic-minded Baltimoreans joined in to make it a real event. The Johns Hopkins (University) Press undertook publication of a book on Baltimore architecture which could also serve as a catalog to the exhibition. The result was a handsome volume with numerous photographs and an accompanying text by Richard H. Howland and Eleanor P. Spencer, of the departments of fine arts of The Johns Hopkins University and Goucher College, respectively.

Baltimore members of the Society of Architectural Historians contributed to the proceedings by sponsoring a guided tour of some of the city's buildings. To round things off, the Municipal Art Society of Baltimore City, Goucher College and the museum itself each sponsored a lecture in conjunction with the exhibition. Speakers for these were Henry-Russell Hitchcock, Philip Johnson and Clarence Ward.

(Continued on page 340)

# DWYER KITCHENS

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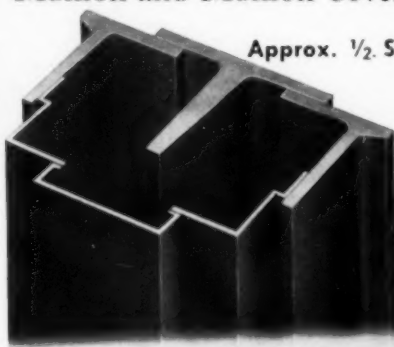
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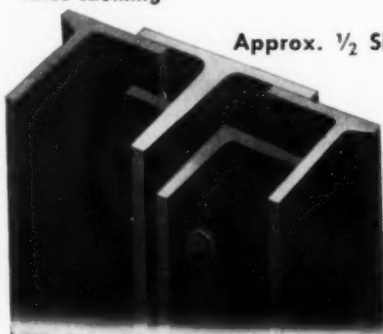
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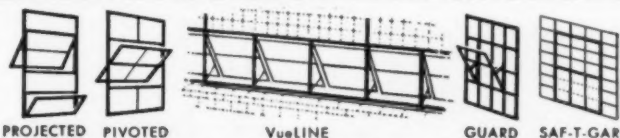
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## THE RECORD REPORTS

(Continued from page 338)

The Classical Revival left Baltimore with many fine structures including, near right, Benjamin Henry Latrobe's Roman Catholic Cathedral (begun 1808, dedicated 1821 and finally completed in the 1870's), and Robert Mills' 1815 Washington Monument, which preceded his design for the monument in the nation's capital



### WEATHER STRIPS FOR SLIDING DOORS



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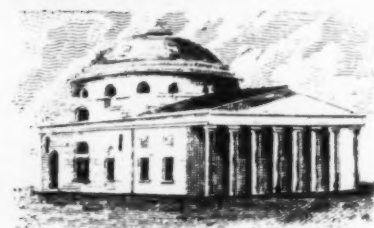


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Below are two buildings by Robert Cary Long Sr. Photograph shows the Peale Museum, 1813, at which the exhibition was held. It is said to be "the first substantial structure in the United States designed expressly as a museum." Sketch is of Long's building for University of Maryland's medical college



(Continued on page 312)

# NOW—a water-soluble water repellent for masonry



Note how water refuses to penetrate right half of masonry block (treated with G-E silicone water repellent) while untreated left half is saturated.

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**GENERAL  ELECTRIC**

**G-E silicone, SC-50,  
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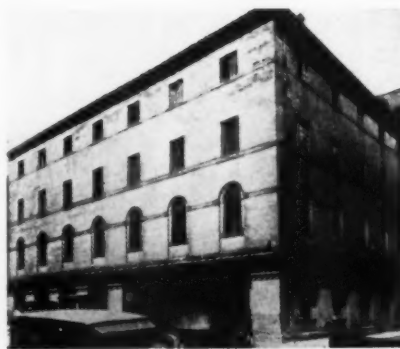
City  Zone  State

(In Canada, mail to: Canadian General Electric Company, Ltd., Toronto)

## THE RECORD REPORTS

(Continued from page 340)

Industrial Baltimore: near right, U. S. Appraisers Stores warehouse building, 1839, demolished in 1933. Far right, cast-iron front commercial building, built in the 1870's



Below: Mortuary Chapel in Greenmount Cemetery, designed in 1856 by J. R. Nierensee and J. C. Nielson, is a brownstone example of Gothic Revival Baltimore



Below: Some of Baltimore's famous row houses. This particular group dates from the 1840's



(More news on page 348)



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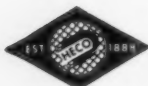
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## THE RECORD REPORTS

matter to the attention of its members.

### Warn on "Compromise"

The A.I.A. and A.G.C. have been joining hands in opposition to localized efforts requiring separation of contracts on Federal construction projects, and they have been fairly successful to date. While no national drive is evident for separate contracts, there have been in-

(Continued from page 15)

stances of efforts at state level to secure legislation of this type.

The contractors are confident they have the situation under control at the present time, but Mr. Snow issued this note of warning: "A strategic pattern may be developing such as to advocate and press for separate contracts and then offer a compromise to settle for legislation that would require naming of sub-contractors."

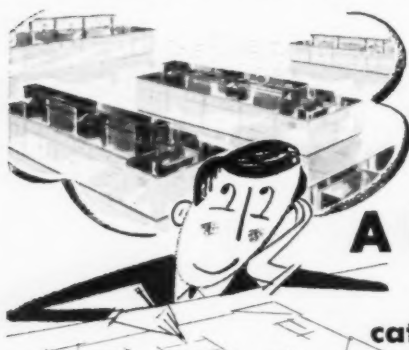


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### VA Changes Noted

Of interest to architects as well as contractors was the report that Veterans Administration now is giving its construction superintendents authority to approve changes costing not more than \$500. The agency also had inaugurated changes in procedure for handling change orders which eliminate many delays complained of by contractors building VA hospitals.

### Against ACE Transfer

The A.G.C. members reaffirmed their contention that the Federal agencies already handling big government construction programs should be allowed to continue to do so. They stand against a re-organization that would transfer the work of the Army Corps of Engineers and other functions to other old-line or new agencies. The A.I.A. Board of Directors, on the other hand, has approved a resolution recommending a coordinating body in the Federal Government structure for all construction programs except those of the defense and military. The position of the two agencies lines up on dead center insofar as the national defense programs are concerned.

### Quick Mobilization Cited

A.G.C. pointed out in a 1953 resolution that construction operations are basic to defense preparations, and such work continues as one of the industry's most important responsibilities. During the defense program prior to World War II, during the entire war period, and during the subsequent defense program, the resolution asserted, the industry has mobilized immediately for the fast and economical construction of defense projects.

The increasing promptness and effectiveness with which this mobilization has become possible depends first on the familiarity of the governmental agencies with the tasks for which they are responsible and second, on the familiarity of contracting organizations with the policies and personnel of the agencies, the A.G.C. resolution stated. Much of this familiarity, it added, is gained through execution of civilian construction work.

Thus it was recommended that, during periods of unsettled international conditions, the agencies which have mobilized themselves and contracting organizations, or can do so promptly, should continue administration of Federal and Federal-aid construction programs.



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## THE RECORD REPORTS

(Continued from page 342)

### LANDSCAPE ARCHITECTS CONVENE IN ATLANTA

The 1953 convention of the American Society of Landscape Architects, held in Atlanta at the end of January, was organized to provide a look at the current state of the profession in three areas — broad-scale planning, residential practice and public agencies.



Left: entrance to the Dinkler Room, Dinkler-Ansley Hotel, Atlanta, headquarters of the annual meeting. Below: Leon Zach, the new president, with the outgoing president, Lawrence Linnard



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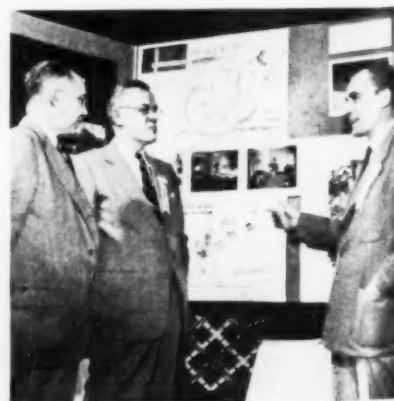
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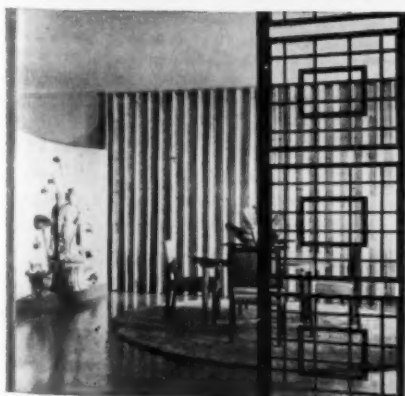
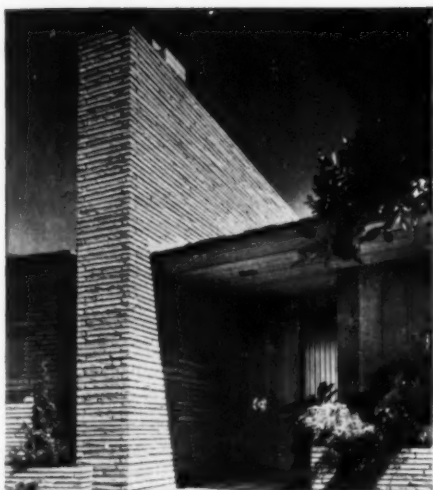
In the field of broad-scale planning, Wilbur H. Simonson, secretary of the Committee on Roadside Development of A.A.S.H.O., discussed "Highways and Associated Developments" and Carroll A. Towne, chief of the Atomic Energy Commission's Community Operations Office, explained AEC attitudes toward community development in areas near its plants, emphasizing the desire of AEC to get out of the community operation business as quickly as possible.

Ralph E. Griswold, Pittsburgh landscape architect and moderator for a panel on private industrial and commercial developments, noted that this is a growing phase of professional practice for landscape architects. A group of speakers discussed their work on such

(Continued on page 352)



At one of the exhibits: Russell H. Kiley, Harland Bartholomew and Associates, St. Louis; Chairman Hubert B. Owens, University of Georgia Division of Landscape Architecture; and Eugene R. Martini, private practice, Atlanta, Ga.



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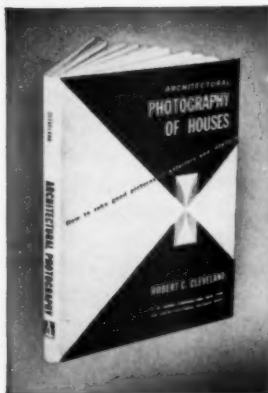
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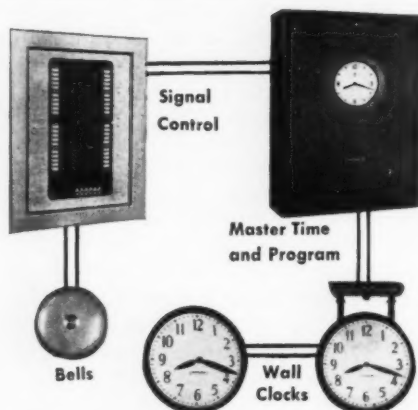
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## THE RECORD REPORTS

(Continued from page 348)

projects — Arthur G. Barton, Glendale, Calif., erosion control and soil stabilization at Los Alamos atomic energy testing grounds; Marion V. Packard, Columbus, Ohio, Fairless Hills community development in eastern Pennsylvania (housing, shopping centers, parks and other community facilities); Sidney N. Shurcliff, Boston, "Shoppers World," the mammoth shopping center in Framingham, Mass.; and Philip D. Simonds, Pittsburgh (substituting for his brother, John O. Simonds), the Allegheny County Airport and a unique outdoor theater.

Speaking on the residential panel, Margaret Osborn of Cleveland discussed the social changes which have succeeded the "Large Estate Era" and observed that the designer "must cope with the



A view of the exhibition room

complete lack of culture as displayed by an increasing number of people." Other speakers on the panel were Theodore Osmundsen Jr., San Francisco, who noted that of 30 landscape architects in his area, all but one base their practice on residential garden design; Frederick B. Stresau, Fort Lauderdale, Fla.; Roberta A. Wightman, Seattle; and George A. Yarwood, Westogue, Conn.

Henry J. Toombs, F.A.I.A., of Atlanta, addressing the opening luncheon session, called for "urbanization without concentration" as an objective holding great hope for the "future amenity" of cities. On the relations of the professions, he said: "I think landscape architects and architects are one and the same thing — just different material. We ought to be very familiar with each other's problems. In this day of many technical complexities specialization seems obligatory, but I, for one, hope

(Continued on page 356)

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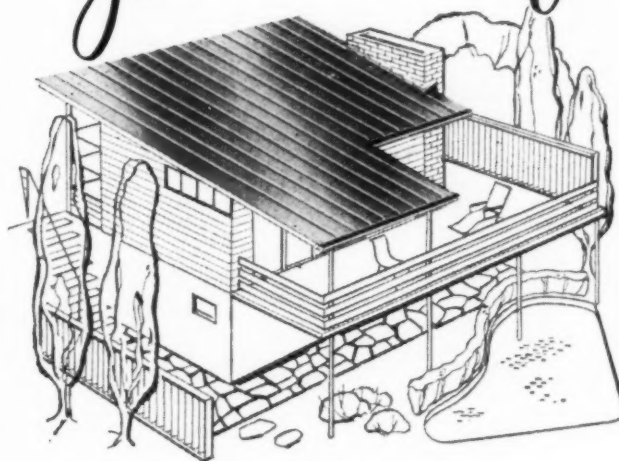
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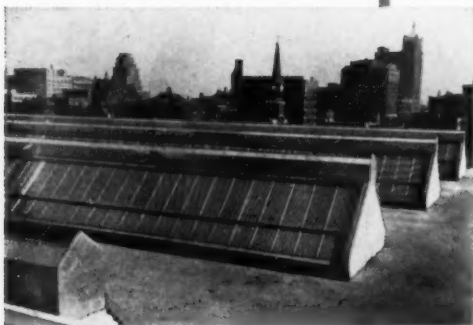
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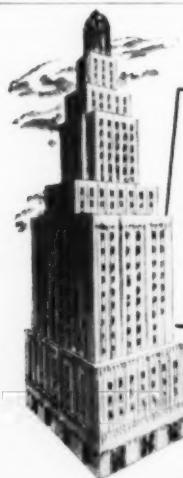
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SET OF MATERIALS:  
A PIECE OF PLYWOOD 1/2" THICK AND 24" X 36"  
BEHOLD THIS PIECE AND BE ADVISED ALL THE COMPONENT PARTS OF THE CHAIR AS INDICATED IN THE SIDE DRAWING, NO. 17 AND 18 REQUIRE TWO PIECES EACH.  
SEE GENERAL INSTRUCTIONS ON PAGE 54.  
AFTER THE MATERIAL IS READY TO BE ASSEMBLED, PROCEED TO JOIN AS FOLLOWS:  
(1) 24" WITH 1/2" (2) 36" WITH 1/2" (3) 24" WITH 1/2" (4) 36" WITH 1/2" (5) 24" WITH 1/2" (6) 36" WITH 1/2" (7) 24" WITH 1/2" (8) 36" WITH 1/2" (9) 24" WITH 1/2" (10) 36" WITH 1/2" (11) 24" WITH 1/2" (12) 36" WITH 1/2" (13) 24" WITH 1/2" (14) 36" WITH 1/2" (15) 24" WITH 1/2" (16) 36" WITH 1/2" (17) 24" WITH 1/2" (18) 36" WITH 1/2" (19) 24" WITH 1/2" (20) 36" WITH 1/2" (21) 24" WITH 1/2" (22) 36" WITH 1/2" (23) 24" WITH 1/2" (24) 36" WITH 1/2" (25) 24" WITH 1/2" (26) 36" WITH 1/2" (27) 24" WITH 1/2" (28) 36" WITH 1/2" (29) 24" WITH 1/2" (30) 36" WITH 1/2" (31) 24" WITH 1/2" (32) 36" WITH 1/2" (33) 24" WITH 1/2" (34) 36" WITH 1/2" (35) 24" WITH 1/2" (36) 36" WITH 1/2" (37) 24" WITH 1/2" (38) 36" WITH 1/2" (39) 24" WITH 1/2" (40) 36" WITH 1/2" (41) 24" WITH 1/2" (42) 36" WITH 1/2" (43) 24" WITH 1/2" (44) 36" WITH 1/2" (45) 24" WITH 1/2" (46) 36" WITH 1/2" (47) 24" WITH 1/2" (48) 36" WITH 1/2" (49) 24" WITH 1/2" (50) 36" WITH 1/2" (51) 24" WITH 1/2" (52) 36" WITH 1/2" (53) 24" WITH 1/2" 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## PREFABRICATED MATS CUT MANHOURS 50%

**B**Y welding steel reinforcing bars into prefabricated mats, time for erecting these bars has been cut 50% on this \$40,000,000 apartment project.

Eight wooden templates are used to lay out and weld 12' x 16' mats of ½" reinforcing rods. Four steel workers lay the rod lengths in templates and tie off the joints. A welder follows up tacking the rods at various positions to keep the mat in alignment. These prefabricated mats are then stored until needed. Center sections are hoisted to the top of the building first, followed by mats for the wing sections.

Due to the size of this 18 building project, it was impossible to secure sufficient skilled steel workers needed to position reinforcing steel bars with conventional methods. Before prefabrication of the mats, two days were required to lay the steel for each wing. With the welded mats, this job is done in half the time, saving 50 man-hours on each wing.

**HOW TO DESIGN IN STEEL.** Latest data on arc welded structural design is presented in the new 9th Edition Procedure Handbook of Arc Welding Design and Practice. Price only \$2.00 postpaid in the U. S. A.; \$2.50 elsewhere. Write on your letterhead to Dept. 2602.



Welding ½" reinforcing bars into prefabricated mats on Los Angeles apartment project of the Metropolitan Life Insurance Company. Architect, Leonard Schultz, New York. Contractors, Starrett Bros. and Eken.



Steel bars are held in place by ½" by 1-½" grooved board templates. Completed mats in background are stored until needed. Steel fabrication done by the Anthony C. Meehleis Company.

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Cleveland 17, Ohio  
THE WORLD'S LARGEST MANUFACTURER OF  
ARC WELDING EQUIPMENT

## THE RECORD REPORTS

(Continued from page 352)

for the closest understanding between the branches of a great profession."

Leon Zach, chief of the Planning Branch of the Chief of Engineers' Engineering Division, Washington, D. C., succeeded Lawrence G. Linnard, Maumee, Ohio, as A.S.L.A. president. Other new officers: Fred Barlow Jr., Los Angeles — vice president; C. Earl Morrow, New York — secretary; Norman T. Newton, chairman of the Department of Landscape Architecture at Harvard's Graduate School of Design — treasurer.



Above: President Leon Zach, Washington; Sidney Shurcliff, Boston; and Mr. Owens  
Below: students of landscape architecture at University of Georgia visited exhibits



Below: Lawrence Linnard, the outgoing president, addressing the landscape architects at their annual dinner. Sidney Shurcliff was the principal speaker



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## ILLNESS AND ABSENTEEISM GO DOWN



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Where high heat or fume conditions require the removal of large volumes of air, the Burt Monovent moves more air per dollar than any other ventilator. Installed as a continuous unit the entire length of the building, the Monovent converts the roof line into a giant exhaust valve. Uniform ventilation is provided. Maintenance is minimized. Long life is assured by Burt's careful engineering and sturdy construction. Reduced "time-off" losses and increased production soon pay back installation costs.

See Sweets or write  
for Bulletin SPV-6

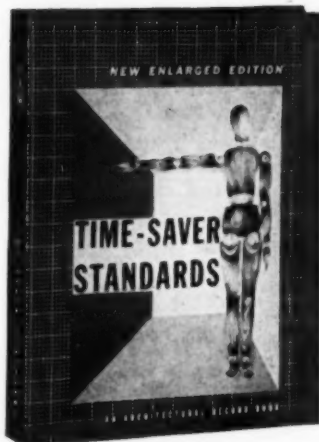
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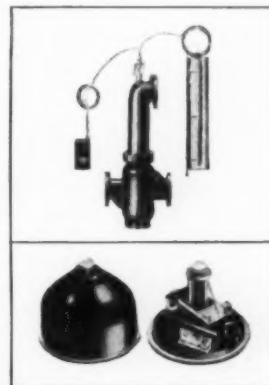
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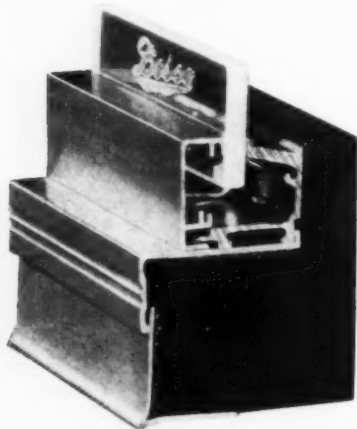
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## P E R S P E C T I V E S

(Continued from page 9)

Hallam Tuck, for whom I designed a very big house, gardens and farm group on the Battlefield of Waterloo. Later, I designed a house for Jean Wittouck on the outskirts of Brussels. These buildings took me abroad several times a year, which was always a pleasure and enabled me to keep up my Paris associations.

AFTER A SERIOUS OPERATION in 1933, and six months in a hospital bed, I received a "blood transfusion" when asked to join the Board of Design of the New York World's Fair — known as THE WORLD OF TOMORROW. At the same time, Mayor LaGuardia asked me to design the airport at North Beach, Long Island, now known as LaGuardia Field. These jobs gave me a new lease on life and brought me in contact with that most interesting man, the Mayor, known as "The Little Flower," who became a staunch friend.

In 1948, The American Battle Monuments Commission appointed our firm to design a memorial cemetery at Epinal, in the Vosges country of France; and President Truman asked me to design the much-discussed second story balcony on the south portico of The White House. It pleased me a short time afterwards to be asked to act as Consulting Architect to the Commission charged with the Renovation of The Executive Mansion.

I haven't spoken of the interest I had in serving four years on the Fine Arts Commission, to which I was appointed by President Coolidge; the years devoted to work on the Treasury Board of Architectural Consultants; and the seventeen years of service on the National Capital Park and Planning Commission — all of them in Washington. These appointments, while they called for much extra-curricular work, added zest to my architectural career.

HERE ARE BUT A FEW of the many opportunities that fell to my lot. Luck, friends, a devoted partner — the late Chester Holmes Aldrich — and many able associates, all contributed to the joy I have had in my profession.

— Wm. Adams Delano

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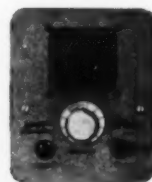


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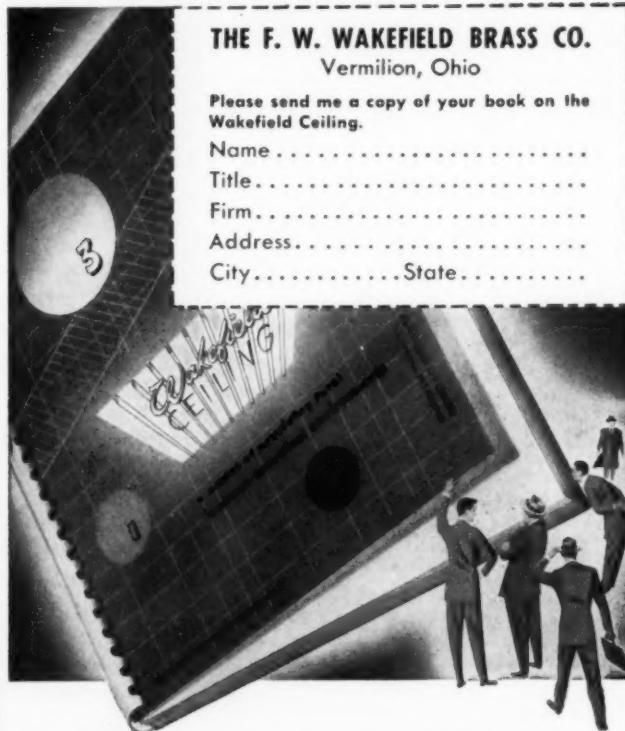
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## REQUIRED READING

(Continued from page 48)

many references to Britain's good examples.

Arthur B. Gallion puts the whole discussion into its proper broad frame with "Civic Design and Democracy." For city building is a process, not to be understood in terms of single programs or projects.

Vernon De Mars completes the essay section with "Townscape and the Architect: Some Problems of the Urban Scene," an expansion on his paper presented at the 1951 A.I.A. convention in Chicago. He, too, stresses the importance of diversity in planning.

The viewpoints of all these authors are familiar. The value of these essays as a collection is that they set the stage for a many-sided approach to Urban Redevelopment. The conflicting elements are left unresolved. It might have been better had the U.R.S., made a formal statement of its approach but it would appear that the subject was too complex to formulate completely and still too fluid to freeze at this stage. A fuller coverage and evaluation of the difficulties encountered during the study is to be found in the final monograph, number five.

2. "Industrial Location and Urban Redevelopment" by Coleman Woodbury with the assistance of Frank Cliffe and 3. "Urban Redevelopment and the Urbanite" by William L. Slayton and Richard Dewey are the most substantial monographs and present the most solid data, tying into the broader fields of our industrial economy and urban society. (The two studies take up fully half of this volume.) Knowledge of these fields is basic to understanding the facts of life as contemporary industrial economists and urban sociologists know and understand them and as architects and planners are just beginning to. The shifts of our productive plant between different regions and the changing preferences and needs of city dwellers have direct effects on our cities, coming to a focus in problems of redevelopment. They have been the subject of an increasingly extensive literature in recent years which is thoroughly covered and much of it summarized in these two studies.

4. "Local Government Organization in Metropolitan Areas: Its Relation to Urban Redevelopment" by Victor Jones goes into the baffling question of how metropolitan government can be made to operate where the planning and administrative problems extend beyond the jurisdiction of municipal governments. The various means by which

(Continued on page 368)

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## REQUIRED READING

(Continued from page 364)

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these problems have been met in different cities are fully covered.

5. "The Background and Prospects of Urban Redevelopment in the United States" by Coleman Woodbury is broadly descriptive rather than penetrating in its analysis. It "is an attempt to sketch in some perspective several parts of the urban scene in this country, to indicate some objectives for cities in the future, and to suggest some of the basic issues that have to be faced by those who would redevelop them." It looks at the city during approximately the past half-century in these terms: 1. as a functional unit in the economy of its region and nation; 2. as a social structure or organism with its own processes of growth, equilibrium and decay; and 3. as a physical plant or apparatus for accommodating all of its citizens' activities. And it outlines trends and problems from the points of view of the *City Beautiful* movement to the improvement of local government finances and the recurrent need for improved leadership and morale.

As the editor and the various authors remind us from time to time *there are no easy answers* to the problems of redevelopment. Nor should anyone expect that this study will give the last word; there can never be a last word on this continuing process. What this collection does, however, is summarize a great deal of material and point the way to a host of more specialized studies through copious citations from them: census data, regional subdivisions of the national economy; social science survey material; and the rest. Other comprehensive studies, it may be hoped, will follow and add to the structure of that *Science of Cities* that Patrick Geddes began to build some forty years ago and the broad movement that he so largely instigated for *Renewal of Cities*, both central and suburban.<sup>2</sup>

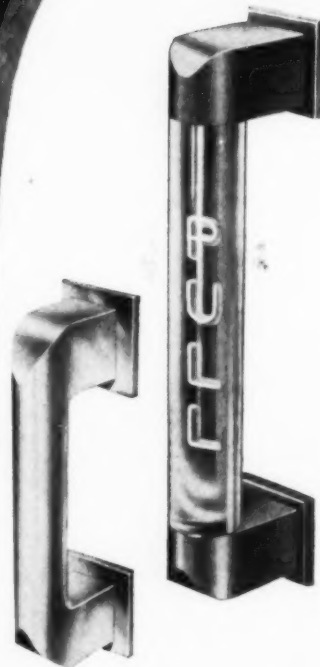
The architect-reader of the Urban Redevelopment's Study's two volumes would probably like to see a fuller realization of the importance of design. The economist-reader would probably like to see a more pointed study of the effects of redevelopment on the economic base of cities. It would have been a boon to all readers, especially the busy planners and administrators, if the books had been greatly condensed. But this is a study of a wide and confused field with many complexities and very fuzzy boundaries; it covers the field well and goes far toward putting its complexities in order.

<sup>2</sup>"*Cities In Evolution*." By Patrick Geddes. Oxford University Press. (New York, N. Y.) 1950.

(Continued on page 372)



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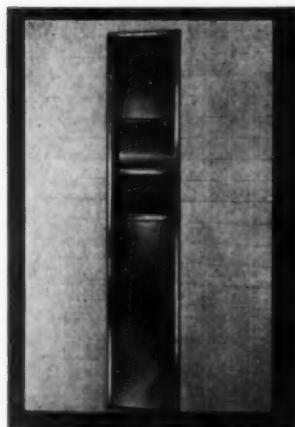
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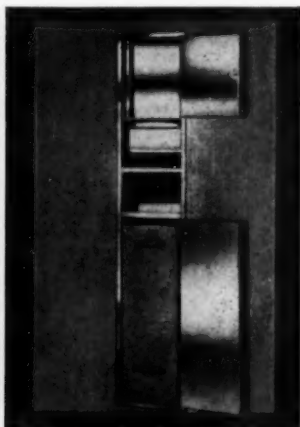
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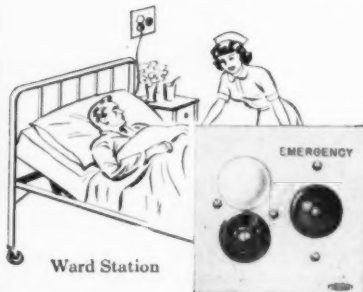


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## REQUIRED READING

(Continued from page 368)

### ECONOMY IN SCHOOL CONSTRUCTION

*Cutting Costs in Schoolhouse Construction. American Association of School Administrators (1201 Sixteenth St., N. W., Washington, D. C.) 1952. 5½ by 7½ in. 19 pp., illus. 25 cents.*



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These and other recommendations, clearly, concisely presented, are well worth the attention of those interested in current school construction. E. B.

### FURNITURE

*New Furniture. Edited by Gerd Hatje. Wittenborn, Schultz, Inc., Publishers. (38 E. 57th St., New York 22, N. Y.) 1952. 8½ by 11½ in. 132 pp. \$8.50.*

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(Continued on page 376)

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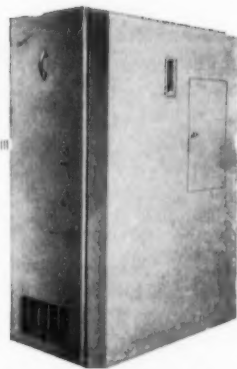


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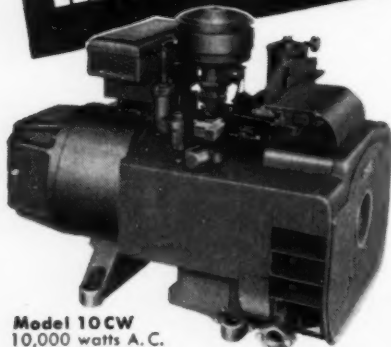
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## REQUIRED READING

(Continued from page 372)

signers, this annual volume is translated into English, German and French. An introduction by the editor explains the change in furniture design, brought about by an architectural trend of rooms serving more than one purpose — necessitating a new type of functionalism heretofore not required. Containing 275 excellent photographs, accompanied by a brief description of the article and giving the designer and manufacturer in each case, this handy "guide" to better design should be of interest to anyone involved in furnishing a home. Seating units occupy the majority of material presented, although tables, storage units, bedding, nursery furniture, kitchen units and furniture for outdoor living is adequately covered. A comprehensive index to manufacturers, designers and photographers is found in the back pages, with complete addresses given for each. The book is an attractive asset to any library.

Jeanne G. Whitbeck.

## BOOKS RECEIVED

*The Effect of the Heights of Stretcher Rails on the Diagonal Strength of Frames.* By M. J. Merrick. Research Development Report No. 1. Furniture Development Council. (11 Adelphi Terrace, London W C 2, England) 8 by 13 in. 33 pp., illus.

*Elementi di Urbanistica.* By Luigi Dodo. Second Edition. Editrice Politecnica; Cecare Tamburini (Milano, Italy). 1953. 7 by 9½ in. 262 pp., illus.

*Maryland Builds. Report of the Department of Public Improvements of the State of Maryland. For the Period January 8, 1951 to December 31, 1952.* (Baltimore, Md.) 1953. 6½ by 9½ in. 161 pp., illus.

*The Smaller English House 1500-1939.* By Reginald Turnor. B. T. Batsford, Ltd. (London, England) 1952. 7¼ by 10 in. 216 pp., illus.

*Statically Indeterminate Structures. Their Analysis and Design.* By Paul Andersen. The Ronald Press Company (15 E. 26th St. New York, N. Y.) 1953. 6¼ by 9¼ in. 315 pp., illus.

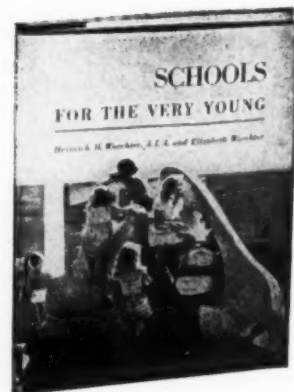
*Tables and Formulas for Fixed End Moments of Members of Constant Moment of Inertia.* By Paul Rogers. Frederick Ungar Publishing Company. (105 E. 24th St. New York, N. Y.) 6¼ by 9½ in. 95 pp., illus.

*Theory of Beauty.* By Harold Osborn. Philosophical Library (New York, N. Y.) 5½ by 8¾ in. 203 pp., illus.

*Town Design.* By Frederick Gibberd. The Architectural Press (London, England) 1953. 9 by 11 in. 300 pp., illus.

# Schools for the Very Young

by HEINRICH H. WAECHTER, A.I.A.  
and ELISABETH WAECHTER



THOUGH many volumes have been written about school design, "Schools for the Very Young" is — so far as we know — the first in which an architect and a child educator have collaborated to provide an up-to-date treatise on the requirements of the particular type of school demanded for the proper training of the very young child.

Beginning with a brief yet adequate historical and philosophical background, in which the development of the theory and practice of child education is discussed, the book goes on to describe the pre-school in action, noting the events of the school day and the corresponding environmental needs of the children and their teachers. Examples of existing pre-schools are presented with critical comment. Detailed information is given concerning the space apportionments and arrangements called for by the activities peculiar to such institutions. Since one of the authors is especially concerned with city planning, the relation of the pre-school to its neighborhood and community is analyzed, and the many different types of pre-schools that have developed to meet special conditions are enumerated and explained.

The outdoor space and its proper equipment are thoroughly covered from the standpoint of a capable architect who has given much thought to the problem. Technological problems of construction, lighting, ventilation, mechanical equipment, etc., are scrutinized in the light of the most recent practice. A wealth of illustrations add both interest and information, and a selective bibliography will aid further study.

208 pages, 7¼ x 10, stiff binding. Price \$6.50.

Book Department, F. W. Dodge Corp.  
119 West 40th Street, New York 18, N. Y.

Enclosed is \$\_\_\_\_\_ for \_\_\_\_\_ copy(s) of  
"Schools for the Very Young" by Heinrich H.  
and Elisabeth Waechter at \$6.50 per copy.  
(Add 20¢ for N.Y.C. delivery — \$6.70.)

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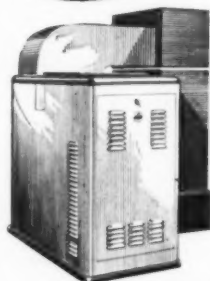
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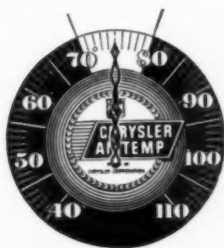
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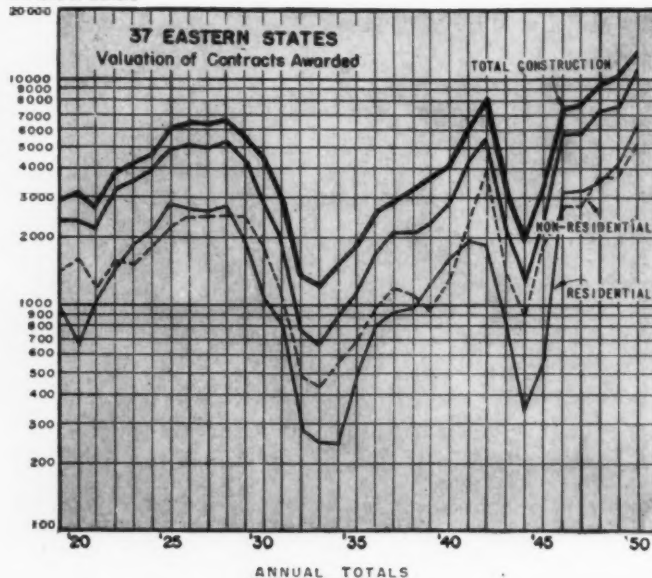
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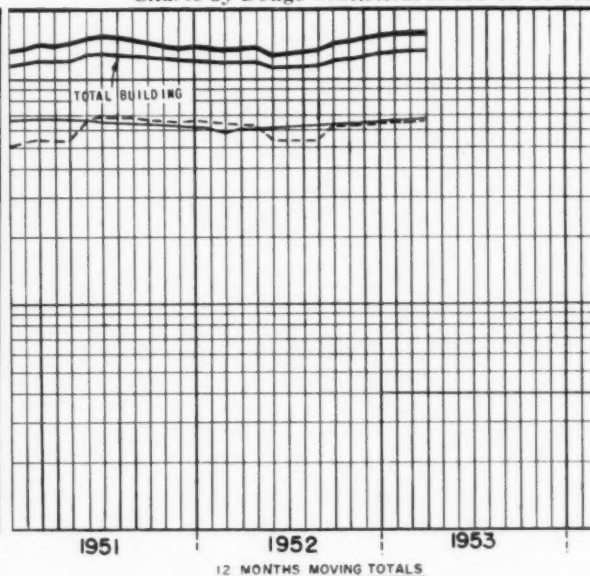


# CURRENT TRENDS IN CONSTRUCTION

Millions of Dollars

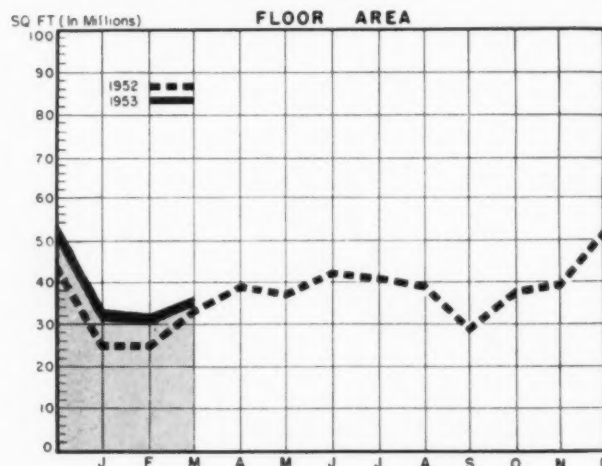


Charts by Dodge Statistical Research Service



Commercial Building 1947-53					
(37 Eastern States) • (Contracts Awarded—Millions of Dollars)					
Year	Annual Total	Monthly Average	Year	Annual Total	Monthly Average
1947	785	65	1950	1208	101
1948	975	81	1951	915	76
1949	885	74	1952	979	82
Monthly Totals					
1952	Monthly Total	1952	Monthly Total	1953	Monthly Total
Jan.	56	July	92	Jan.	87
Feb.	62	Aug.	94	Feb.	100
Mar.	71	Sept.	97	Mar.	101
Apr.	75	Oct.	93		
May	80	Nov.	84		
June	74	Dec.	100		

NONRESIDENTIAL BUILDING (37 EASTERN STATES)



## CONSTRUCTION UP 11% IN FIRST QUARTER OF 1953

Construction activity in the first quarter of 1953 continued at high levels, with total awards as reported by F. W. Dodge Corporation running 11 per cent over last year. The three-month construction total (37 eastern states) was \$3,444,696,000. March contracts were up 32 per cent over February but only two per cent over March 1952.

Residential contracts in March as reported by Dodge totaled \$605,200,000, which was two per cent above March 1952. Nonresidential contract awards were \$449,175,000, a decline of three per cent from 1952.

Decontrol of materials was having little effect on prices, which continued stable. Among most active types of work were commercial buildings (up 53 per cent over 1952), recreational (up 83 per cent), hospitals, schools, churches. However, there was considerable variation in regional activity: the St. Louis territory showed a loss of 20 per cent in the first quarter as a result of heavy declines in engineering and nonresidential work. The Kansas City territory was up 10 per cent although there was a drop of 29 per cent in residential work.

RESIDENTIAL BUILDING (37 EASTERN STATES)

